

THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LVIII.

SATURDAY, JUNE 13, 1891.

No. 24.

ORIGINAL ARTICLES.

LINEAR CRANIOTOMY FOR MICROCEPHALUS.

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LESS than a year ago Lannelongue reported two cases in which, by the removal of a long strip from the cranium, he hoped to provide room for the cerebral development of microcephalic children. Whether the defective brain-growth is the result of early synostosis of the cranial sutures or the reverse obtains, the data for consideration are a small brain and a firmly closed capsule resisting what little impetus toward development the former might possess. To reduce this resistance by surgical procedure seems rational enough. The ingenious operation of Lannelongue aims to restore the firmly closed microcephalic head to the infantile conditions existing before closure of the fontanelles and obliteration of the sutures occurred. From a recent article by Dr. Keen (*American Journal of the Medical Sciences*, June, 1891) it would appear that six cases have been operated on. At the recent meeting of the French Surgical Congress M. Lannelongue reports upon twenty-five cases. Altogether, therefore, the cases are as yet sufficiently few in number to justify my recording the following one, which presents some points of unusual interest:

Emma S., aged three years and seven months; referred to me by Dr. Jenkins, of Newport, Ky. The parents were living and healthy, having six children, one of them an imbecile, aged sixteen years. The mother states that the little child's head "closed" soon after birth. To this fact she ascribed its backwardness in mental development. At the present time the child is well formed, healthy, of normal bodily development, and ruddy complexion. A glance reveals the relatively small size of the head and the almost incessant twitching of the ocular muscles. The patient is unable to walk or sit up, even if supported. When raised on a pillow the body rolls over to one or the other side. The child gives no evidence of knowing her mother and seems absolutely unconscious of persons or things about her. The brightest objects placed before her eyes do not attract her attention. The only sound of which she is cognizant is the click of the spoon against the porridge-bowl when food is brought to her bed. When she hears this she protrudes the tongue in efforts at suction. Swallowing

is accomplished with some difficulty, some food being regurgitated. In the incoherent movements which from time to time the child makes it is evident that the left arm is very rarely used, and that in such movements as scratching or picking at the bedclothes the range of motion is greatly limited as compared with that of the right arm. Every hour or two during the twenty-four the ward in which the child is placed resounds with a short, sharp cry of the patient not unlike the *crie encéphalique* preceding an epileptic seizure.

The head is small and sugar-loafed—typically oxycephalic. The sagittal suture presents itself as a distinct solid ridge, with a well-defined groove on the right side. During the process of ossification the left had doubtless overlapped the right parietal bone. The measurements as taken by calipers are as follows: Bi-frontal diameter, 3 inches; bi-parietal, $4\frac{1}{8}$ inches; occipito-frontal, 6 inches; circumferential measurement between ears, $9\frac{1}{4}$ inches; between occipital protuberance and supra-orbital ridge, 10 inches.

The operation was performed on February 9th, the anæsthetic being chloroform. Aseptic preparations of the head were observed. Application of the flat Esmarch strap was made around the head to control hæmorrhage from the scalp. The incision was parallel with and one-half inch to the right of the sagittal suture, from the lambdoidal suture to within an inch of the orbital margin. The posterior and anterior extremities were curved outward. There was no hæmorrhage from the scalp. The flap, including the periosteum, having been removed sufficiently from the bone, a half-inch trephine was applied at the posterior end of the exposed cranium and a button removed. With rongeur forceps a strip three-eighths of an inch wide and five and one-half inches long was then cut from the skull. The alleged greater adherence of the dura in the undeveloped skull presented no obstacles, except where the frontal crossed the line of incision. It was only by the greatest care that the wounding of the dura at this point was obviated. The cleft in the bone was extended subcutaneously to within one-half inch of the orbit. Although there was considerable oozing, the hæmorrhage yielded readily to compression. A strip of the periosteum corresponding to the groove was next removed. Catgut drainage was next provided for, and the wound closed with the continuous catgut suture. The operation from the beginning of the anæsthesia to the end lasted forty minutes. A very considerable shock from loss of blood followed it. Within twenty-four hours there was recovery from this. The operation was not followed by an absolutely "normal" course of repair. There was some suppuration from the posterior end of the wound, probably from an imperfectly steril-

ized catgut strand. The temperature on the third and fourth days ran to 103° in the evening. Yet, with the exception of the posterior end of the wound, where a fistula continued for some months, the wound, long as it was, healed by primary union.

And now as to the result three and one-half months after the operation, before the patient's discharge from the hospital: The antero-posterior measurements show no change from those taken prior to the operation; the transverse measurements (calipers) are increased, the bi-parietal $\frac{1}{4}$ of an inch, and the bi-frontal nearly $\frac{3}{8}$ of an inch; the binauricular measurement is 9 $\frac{1}{2}$ inches.

In mentality the child presents the intelligence of a child of six months. With its eyes it follows persons and objects moved before it. It reaches for a watch with either hand, the left having a power of coördination equal to that of the right. When a watch is placed beyond the visual field, as, *e. g.*, on the side of the pillow, either or both hands are used in searching for it. The patient amuses herself with a picture-book, and when tired of one picture she with some difficulty turns the page to look at the next. She recognizes her nurse and occasionally attracts her attention by tugging at her apron when her back is turned. Evidently reason is present, though in a very primitive state. The difficulty in deglutition has entirely disappeared. The *quasi* epileptic cry has ceased to annoy the other inmates of the ward. When the patient is supported on a pillow she will sit up for an hour at a time looking about, seemingly interested in her surroundings. The voluntary efforts which she makes to raise herself to the sitting posture are not as yet successful, although a little help is all she requires.

REMARKS.—The improvement already obtained in this case justifies the operation. If in six months there should appear an arrest in the development of mentality, a similar operation on the left side will be performed. The right side was first operated on because of the apparently limited usefulness of the left arm. If any part of the result thus far achieved may be designated as brilliant, it is in the freedom with which this member is now used by the patient.

The conditions of the microcephalous are so deplorable that any interference promising a shadow of success seems to me justifiable. That the danger to life is very great, I cannot believe. Of twenty-five cases operated on by Lannelongue, only one died of sepsis directly due to the operation, and two from croup, one or two months after operation. It is possible, though not probable, that the laryngeal spasms were of meningeal origin. Even if included with the fatal cases the death-rate would be only 12 per cent. In the article referred to, Keen reports six American operations, excluding two which were not really craniotomies. Of this number two were fatal—one from heart-failure and one from acute anæmia. I believe that the use of the Esmarch strap will largely tend to limit the fatality from either of these sources, since most of the

hæmorrhage comes from the divided vessels of the scalp. The suggestions made by Wyeth to operate on both sides of the skull at one time, and also to forcibly separate the cranial vault from the underlying dura, do not commend themselves. The added shock and hæmorrhage would doubtless increase the immediate danger, and the intra-cranial pocketing of blood would add to the risk of sepsis.

THE PATHOLOGY AND TREATMENT OF CHRONIC OVARITIS.

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THE study of the pathology of ovaritis derives a special interest from the fact that the ovary differs from all other organs of the body in that its function is performed at the expense of a portion of its structure which is never restored to its original condition. The rupture of each Graafian vesicle in ovulation causes the destruction of the vesicle. Rudimentary vesicles mature and repeat the function of their predecessors and are in turn destroyed. Finally the supply ceases, and the ovary, worn out in structure, becomes functionally incompetent long before the general organization has reached the end of its life and activity. In all other organs of the body, function is effected through cellular disintegration and restoration. This peculiarity in the natural history of the ovary makes it difficult for the superficial observer to distinguish between physiological degeneration and the structural changes which result from chronic ovaritis. Experts also find it no easy matter to distinguish, by gross appearances, the atrophy of old age from the cirrhosis of inflammation.

In discussing the pathology of ovaritis I shall briefly point out some of the established facts which are of most interest in relation to the diagnosis and treatment of this affection, and omit everything which is ill-defined, uncertain and of little interest to surgeons. The pathology of ovaritis is characterized by changes of structure brought about chiefly by areolar hyperplasia first, then by atrophy of the normal tissues, and finally by a condition of cirrhosis. In this respect the morbid process and its products resemble degeneration rather than inflammation such as is observed in other organs. In the natural history of its pathology it is more like certain forms of chronic nephritis. Owing to these peculiar and distinguishing features, the affection has little in common with acute puerperal or non-puerperal ovaritis, or with secondary acute ovaritis due to peritonitis, and all such conditions will, therefore, be carefully excluded from the discussion of the subject in hand.

The first variation from the normal toward the

pathological is deranged innervation—the ovary, owing to its important office and intimate relations to the other organs, being peculiarly prone to reflex disturbances. These, though as a rule temporary, when oft-repeated and prolonged in duration induce changes in the circulation that impair nutrition and finally produce changes of structure. This ovarian hyperæmia, the first step in the process, may subside and complete recovery follow. Reliable evidence of this has been obtained: first by clinical observation of cases which gave all the signs and symptoms of ovarian congestion, and which, under careful management, completely recovered; secondly, by inspection after laparotomy. I have not infrequently found a prolapsed, tender and painful ovary which, upon inspection, after opening the abdomen, was markedly hyperæmic, but presented no apparent change of structure except œdema. After fixing it in place by stitching the utero-ovarian ligament to the upper border of the broad ligament, the signs and symptoms have all subsided. The continuation of the hyperæmia slowly produces those structural changes which are invariably effected by prolonged malnutrition. The first noticeable changes take place in the blood-vessels themselves. These become dilated and a peculiar degeneration of their walls occurs. These changes have been elaborately studied by Dr. E. Noeggerath, who advanced the idea that they were closely related to the genesis of ovarian cystomata. This may be true in certain cases, but the changes more frequently end in hyperplasia of the stroma, which gradually goes on and in time crowds out all the normal structural elements of the ovary. Finally, a true cirrhosis is produced. With these changes in the bloodvessels the circulation is interrupted to a degree that causes œdema, which increases the size of the ovary and renders it softer. Apoplexies sometimes occur, and occasionally one or more of the blood-clots may be seen near the surface. These conditions can be distinguished from a diseased vesicle by the staining of the tissues around the clot. This last-mentioned lesion occurs in the early stage of ovaritis, and becomes less common as the process of hyperplasia proceeds to complete cirrhosis. These changes explain some of the important facts in the clinical history. The ovary which is found enlarged, softened, and tender to the touch will months afterward appear subnormal in size. Likewise the same lesions may be recognized upon inspection after laparotomy, if by previous study one has become familiar with them. While hyperplasia of the stroma is going on, the follicular elements undergo certain changes. The contents of the follicles become cloudy from degeneration of the epithelial elements. The gross appearance of the ovary at this time would lead one to suppose that there were

a number of vesicles approaching maturity, but the uncommon number of these distended vesicles is evidence that they are abnormal.

The full value of a knowledge of the gross pathology of ovaritis can be fully estimated by those who have mistaken the physiological for a pathological degeneration of the ovaries, and have removed them, to learn subsequently, through the microscopist, that they were not diseased. I well remember hearing an interesting discussion regarding cases in which one ovary has to be removed for advanced disease. The question was: Should the other ovary be left, or removed, if there is no positive evidence of its being diseased? Much was said pro and con, but not a word was uttered about how to detect pathological changes which should decide the matter. The morbid appearances which aid the surgeon in deciding when to remove an ovary and when not to remove it are as follows: Follicles which, from their size, number and dark color are evidently diseased should be removed. Enlargement, congestion, and softening from œdema, and patches of induration with irregular distention of the vessels and the evidence of small blood-clots, as described above, are conditions indicating removal. Cirrhosis, indicated by subnormal size, induration and rough surface, when found in a young subject, can be easily passed upon; but in a subject near or after menopause this appearance of the ovary does not decide with certainty whether there is cirrhosis or simply senile atrophic degeneration. I have thus briefly described this part of the subject, introducing only such facts as I have obtained from observation, and which have appeared to be of possible use in guiding the surgeon. This brevity arises in part from my limited knowledge, but mostly from the hope of raising a discussion which will doubtless bring out much that we need to know.

Much might be said about the influence of chronic ovaritis upon the functions of the sexual organs and the nutritive and nervous systems, but time will only permit me to say that menstruation is often deranged and in various ways. Dysmenorrhœa is often present; in some the menses are retarded and scanty; in others too frequent and profuse. When the latter condition exists, the ovaritis is more easily controlled than in patients having a scanty flow. The effect upon the nervous system is peculiar and marked, depression and irritability being usually pronounced. The hystero-epilepsy which has attracted much attention from the neurologists is really an epileptiform affection, due, in all cases that I have seen in my own practice, to ovarian disease. Ovaritis also ranks first among all diseases of the sexual organs in the causation of mental disorders.

The causation of chronic ovaritis demands a brief

notice, owing to its intimate relation to the question of treatment. According to my observations, the cause which most frequently obtains is imperfect menstruation. When the uterus is undersized or flexed forward or backward, and the menstrual flow scanty and attended with pain, the ovaries are liable to take on chronic inflammation. This is far more liable to occur if in this class of subjects the sexual function is perverted. Specific causes, such as those producing the eruptive fevers, are said to affect the ovaries, and I believe that acute ovaritis is more liable to occur under these circumstances. It is probably true, also, that gonorrhoea causes acute rather than chronic ovaritis. The strumous diathesis (which I understand to be that condition of organization which invites tuberculosis) predisposes to chronic ovaritis, and inherited or acquired syphilis does likewise. Much has been written about endometritis as a cause of ovaritis upon the ground that the structures of the endometrium and ovaries have a common embryonic genesis, and the fact that the two diseases are often found together, but this is still an open question.

In regard to the diagnosis of chronic ovaritis I refer all interested to the able paper on the subject by my esteemed friend, Dr. Howard A. Kelly, in the *American Journal of Obstetrics* for February, 1891.

TREATMENT.—The advancement of abdominal and pelvic surgery in recent times has led to the removal of the ovaries as the most prompt and effectual treatment of chronic ovaritis. There are reasons for this upon theoretical grounds: the ovary is causing much suffering; there is a likelihood that it will be a long and tedious trouble, and this is especially true if general treatment has failed; the ovaries are not necessary to existence and can be removed with safety; it is according to the rules of surgery to remove any organ, or other portion of the body, that one can live without, in case a disease of the part tends to take life or cause unlimited suffering and invalidism; hence, from this way of looking at the matter, the ovaries should be removed. It is true (and the facts have been proved almost sufficiently) that chronic ovaritis does not end fatally, and is self-limited, though often of long duration. The removal of the ovaries is not free from all danger, though all cases properly operated upon have recovered, and the operation may not in all cases give complete relief. In fact, many of the cases are not much, if at all, improved; even those who are nearing the menopause and who bear the loss of the ovaries better than younger subjects, occasionally suffer much from those nervous disturbances which follow an abrupt menopause, and have to endure pelvic pain in the region of the stumps. The clinical history of cases in which the ovaries

have been removed does not, in all cases, show great advantage over those in which the ovaries are left to complete the natural history of the disease. Younger subjects do not bear the loss of their ovaries agreeably. Some become fat, indolent, inefficient and subject to headaches. Others are irritable, dyspeptic and despondent, while but few enjoy general good health and mental vigor. This statement is contrary to much of the published literature, but is closer to the actual facts. The cases cured are those operated on when near the menopause; those improved are generally such as have suffered from complicating affections—for example, dysmenorrhoea; while the unimproved are the younger subjects in whom the disease was uncomplicated. The objections to surgical treatment apply to the removal of both ovaries. In cases in which one ovary alone is affected, and especially when there is prolapsus of the affected ovary and retro-displacement of the uterus, ovariectomy is perfectly satisfactory. The removal of the diseased ovary gives relief and the retro-displaced uterus can be restored, while the remaining ovary performs its functions, and the general health of the patient is preserved. I desire to be understood as advocating the removal of the ovary only when there are structural changes from inflammation and prolapsus at the same time. Prolapsus can be relieved by fixing the ovary to the upper border of the broad ligament, and the welfare of the patient can thus be better conserved. From advocating conservative measures in regard to abdominal and pelvic surgery it may be inferred that I am behind the age in experience, but I have had a large field for operative surgery and have acted to the fullest extent that I considered justifiable and according to my judgment. In fact I have in the past violated the rules I now advocate, but I have not been satisfied to have my patients simply survive the operations. I require that they be cured, and failures in this regard have, I trust, led to a rational conservatism. I have no word of condemnation for those who have removed and are still removing ovaries for the relief of chronic ovaritis. Their work, while not always beneficial, has been of vast interest to science. Their doings help to perfect surgery. The rough, unsightly scaffoldings employed by builders are temporary necessities which are all cleared away when the structure is perfected and completed. In like manner the heroic, daring experiments of the surgeon are valuable stepping-stones which lead to mature science and art.

The indications for general treatment are to lessen the blood-supply and relieve pain by correcting the deranged innervation. This, in the early stages, demands rest in the recumbent position. At the same time general exercise should be advised either by massage or by gymnastics in the re-

clining position. I specially desire to commend systematic calisthenics in the recumbent position as a most valuable aid in improving or maintaining the general health in many diseases of the pelvic organs which require rest as an important part of the treatment. The condition of the digestive organs should be carefully watched. The poor appetite, coated tongue and constipation, or the capricious appetite, flatulence, and occasional diarrhoea can be relieved by a number of small doses of mercury and a laxative. The saline laxatives are the best when they act without causing flatulence. The use of Saratoga waters often gives good results by improving digestion and keeping the portal circulation active. In keeping up a free elimination by the bowels and kidneys much benefit is obtained. This applies to cases that are apparently debilitated. Many times I have taken cases away from tonics, stimulants and forced feeding, and given saline laxatives, with the effect of increasing the patient's strength. To relieve the pain and lessen the hyperæmia, the bromide of sodium and fluid extract of *hydrastis canadensis* are by far the most potential agents that I have found; they are given in combination and in doses sufficient to produce the desired effect—twenty to thirty grains of the bromide and ten to twenty minims of the *hydrastis*, three times a day, until the physiological effects of the bromide are noticed in a mild degree. If the *hydrastis* in such doses is given alone it sometimes causes pelvic pain of a dull character, but when combined with the bromide it has no such effect. These agents are most efficacious in the beginning of the attack, and hence they should be discontinued as soon as the pain is, in a marked degree, relieved. Should the pain and tenderness return at the succeeding menstrual periods, the bromide and *hydrastis* should be resumed. In some cases much larger doses of bromide are required, and in others it fails altogether to relieve pain. Then it is necessary to employ other agents, especially during menstruation. Ten grains of salicylate of sodium and five of antipyrine, given between meals and in the night when the stomach is empty, answer for some; others, more especially those markedly debilitated, do better on full doses of aromatic spirits of ammonia, camphor, and chloric ether, with small doses of *cannabis indica*. This combination is best suited to those who get relief from gin or whiskey, but it is to be preferred, because alcoholic stimulants, though they may give temporary relief, ultimately do harm. Direct or local treatment should be adapted to the social state of the patient, and the presence or absence of complications, such as endometritis. In the unmarried, local treatment is often injurious. In fact, in such cases it is better to avoid any examination of the pelvic organs if the history is suffi-

ciently clear to enable one to make a diagnosis with reasonable certainty. Hot sitz-baths, counter-irritation and hot vaginal douches, the latter to be given by a competent nurse, comprise about all that I employ in the way of direct treatment. The vaginal douche should not be continued unless it is decidedly sedative in its effects.

In married women (and in those who are married in all but the name) local treatment is more valuable. The treatment of any disease or displacement of the uterus that coexists should be managed in the usual way, and such local applications should be used as may aid in relieving the tender and hyperæmic ovaries. I employ a small tampon or pledget of cotton or wool saturated with equal parts of tincture of belladonna and glycerin, applied behind the cervix uteri, and permitted to remain forty-eight hours, and after its removal a hot douche. These are continued during the first days of treatment. The effect is to support or steady the ovaries while the sedative effect of the belladonna and the depleting effect of the glycerin are obtained. This I have followed with applications of tincture of iodine after the manner of Dr. Emmet. Recently I have with good effect used the sulph-ichthyolate of ammonium, five parts in ninety-five of glycerin, applied in the same way as the belladonna and glycerin.

The general and local treatment thus briefly outlined gives relief to the more pronounced symptoms. The pain becomes less, and also the tenderness. The general health improves and the pelvic congestion subsides. This is apparent in the color of the mucous membrane, the improved menstrual functions and diminished leucorrhœa. The local treatment may then be employed at longer intervals or suspended altogether. The constitutional treatment should now be modified. Tonics and laxatives may still be required, but alteratives are also indicated. Iodine and mercury are the chief agents. They act upon the ovaries as they do upon all glandular organs, and modify or arrest the morbid histological changes which take place slowly. Small doses of bichloride of mercury, with chloride of iron, when iron is indicated, followed by syrup of the iodide of iron, in doses as large as can be borne, may be administered. These can only be used when the bromides are given up. When giving these alteratives the patient often misses the bromides used to give sleep. Sulphonal, at such times, is of great value. In fact it is the most potent sedative, that is at the same time free from unfavorable ultimate or after-effects, that we have in gynecological practice. When a sedative is required while iodide of mercury is being used, I find that ten grains of salicylate of sodium and five grains of antipyrine, given three times a day, an hour before meals, give much relief,

especially in those who suffer from nervous dyspepsia and flatulence.

One important element in the treatment is that of patience and careful watching. Improvement comes, and the patient or the physician gives up treatment and there is danger of relapse. The poor in hospitals often suffer for want of time for prolonged treatment, and this often tempts the surgeon to seek more prompt relief by removal of the ovaries. This does not apply with the same force to those who have time and means to secure the needed care.

THE TECHNIQUE OF PELVIC SURGERY.¹

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THE advancement made in the science and art of surgery during the past few years by the great principles of asepsis and antisepsis, has brought about a revolution in our ideas and methods, positive in its results. The "exploratory incision"—the natural outgrowth of these principles—has placed in the hands of the surgeon the means of making a diagnosis in a large number of cases that were previously improperly diagnosed and treated. This method has rendered possible and suggested operations hitherto never thought of, and, being absolutely safe in the hands of the careful surgeon, it has placed the surgery of to-day in a position of comparative certainty, and raised its principles almost to the level of an exact science. The genius of Lawson Tait marked an era in the history of our art when it gave to the profession those principles which have placed the surgery of the female pelvis upon its present sound basis. His mind and master-hand are clearly seen in the results, whereby countless women have been and will be restored to health and usefulness.

It is my purpose in this paper to consider the technique of pelvic surgery, limiting myself, however, to the practical side of the subject. I shall rely entirely upon my own experience for the selection of such points in the detail of pelvic work upon which I believe success depends.

First, then, let us consider the necessary preparation of a patient about to undergo an abdominal section. If possible, we should have at least twenty-four hours in which to regulate the excretions and secretions, and to properly cleanse the skin. Furthermore, the patient should remain in bed for a day prior to the operation, as, under these circumstances, she will be less restless and nervous subsequently. The hair should be shaved from the pubes, and a general bath of hot water with soap given; care being taken to

see that the abdomen, external organs of generation, and the vagina are thoroughly cleansed. A flesh-brush should be used in washing the abdomen, to get rid of all exfoliated epithelium and sebaceous matter. The umbilicus is to be most carefully cleansed, as septic matter is likely to remain between the folds of skin. After the bath, the external organs of generation and the abdomen are made antiseptic with a 1 to 1000 bichloride solution. A thick layer of bichloride gauze is then placed over the site of operation and surrounding parts, and held in position with a bandage until it is removed at the time of operation. It is my custom to thoroughly "salt" my patients. I order a tablespoonful of a saturated solution of the sulphate of magnesia to be given every hour, until six free movements from the bowels are produced; if the stomach be irritable, I reduce this dose to a teaspoonful every half-hour. About six hours before the time fixed for operating, I order an enema to be given, composed of a tablespoonful of the sulphate of magnesia in a pint of warm water. Too much stress cannot be placed upon the necessity of thus caring for the condition of the bowels, if the surgeon hopes to obtain good results. By thoroughly cleaning out the alimentary tract there is less tendency to subsequent tympany or to paralysis of the intestines, and should sepsis develop, the chances of recovery are greatly increased. The diet should be nutritious, easily digestible, and give rise to the smallest quantity of waste material. The importance of having a properly prepared room in which to perform abdominal sections is, I believe, exaggerated. I do not mean to undervalue the advantages of properly conducted and arranged hospital wards and rooms, but when we take into consideration the brilliant results of "alley work," where the environments are all of the most septic character, and the fact that a great number of operations are now done in amphitheatres, before large classes of students, many of whom are just from the dissecting-room, we are forced to place less importance upon our surroundings.

After the patient is placed upon the operating table, the lower extremities are wrapped in a woollen blanket, which should reach to the level of the great trochanters upon the sides and to the lower margin of the mons veneris in front. The upper extremities are kept out of the way by flexing the forearm upon the arm and securing the wristband of the nightgown to the shoulder of the garment by means of safety-pins. A blanket is then placed over the chest to protect that portion of the body from exposure during the operation. The parts surrounding the field of operation are covered with dry bichloride towels. The instruments, sponges and ligatures must be thoroughly aseptic. Every surgeon has his

¹ Read before the Northern Medical Association of Philadelphia, April 10, 1891.

own method of accomplishing this, and the special means employed are of no importance so long as the result is obtained. In making the hands and forearms aseptic the operator and assistant must use the greatest care. The finger-nails should always be kept short and well cleaned. I first wash my arms and forearms for five minutes in hot water and soap, using at the same time a stiff nail-brush. They are then soaked in a 1 to 1000 solution of bichloride for one minute, after which I immerse them in pure alcohol. The operator should see that his assistant and the nurse, who looks after the sponges, etc., have their hands and forearms thoroughly aseptic. A surgeon cannot be too careful in all matters that pertain to clean work. Every point of detail must be conscientiously looked after, and he must be fully imbued with the spirit of the principles of asepsis if good results are to be obtained. No pelvic case can die of sepsis, except when pus or faecal extravasations have entered the abdominal cavity through some neglect of the operator. The surgeon should not delude himself, as many do, with the idea that all precautions were taken, if his patient, under these circumstances, dies of blood-poisoning. The fault is his; he is responsible for the death, and the burden of responsibility must rest heavily upon his conscience, unless he learns from his failures and endeavors by all possible precautions to guard against a subsequent like result. I speak feelingly upon this subject because I have seen so many lives sacrificed that could have been saved if it were not for dirt. Some power should stay the hand of the surgeon who does not grasp with all the powers of his mind the principles of asepsis.

It is now generally held by surgeons that the incision through the abdominal wall should be as small as is consistent with the necessary manipulations. Certainly, the dangers of a subsequent ventral hernia are lessened when we make use of a small opening. An incision of two inches is sufficient in most cases in which the abdomen is opened for pelvic disease. Those who make long incisions disregard the fact that touch, not sight, is employed in pelvic work; the surgeon must, therefore, train his finger—not his eye. Again, a long incision is a great disadvantage, because it allows the intestines and omentum to escape, thus interfering with the rapidity of work, and possibly the success of the operation. The ligation of the pedicle in the removal of diseased appendages is of the utmost importance. The appendages should be ligated and cut off close to the uterine cornua. A failure to do this often necessitates a secondary operation for the removal of the stump. Given a case of pyosalpinx, of what earthly good will an operation be if the entire diseased mass is not removed? And yet I have repeatedly seen surgeons contented in simply deliver-

ing such a mass and throwing a ligature around it without the slightest reference to the amount of diseased tissue included. There can only be one result of such careless and ignorant surgery, namely, failure. There will be no improvement after the operation, and the diseased stump must subsequently be removed by a more experienced surgeon. Always do clean work in the pelvis, should be the key-note to all successful surgery in that region of the body. In tying the pedicle I use No. 5 Chinese silk. It is sufficiently strong and at the same time not too heavy. A very thick ligature is liable to cause irritation, and in some cases to produce sinuses. The ends of the ligature should be cut off close to the knot, otherwise they will interfere with the process of repair at the site of the stump. The figure-of-8 knot is safe and secure; therefore I always use it in preference to others. The Staffordshire knot I mention only to condemn; it is unsafe and should not be employed, as secondary hæmorrhage is liable to follow its use. I use irrigation in those cases in which there are adhesions, or when pus or faecal extravasations have been poured into the abdominal cavity. Irrigation must always be thorough and complete. My apparatus, which holds nearly a gallon, has attached to it a tube with a diameter of half an inch. This gives me a strong and full stream of water, which thoroughly floods and washes out the abdominal cavity. It is utterly impossible to irrigate properly with an ordinary fountain-syringe; and yet I have seen surgeons use such a contrivance, fully believing their technique to be above criticism. Washing out the abdominal cavity after a section is one of the most important of details, and success depends, in a large measure, upon its thorough employment.

The question of drainage has in the past, as well as at the present time, engaged the attention of surgeons; there being many different views upon the value of its frequent or its infrequent use. For my part I am draining less and less. Cases that one year ago I would not have dreamed of closing without drainage I now close without hesitation, and they make prompt and good recoveries. In pus cases I always employ drainage if the abscess contents have escaped into the abdominal cavity. There are some forms of pus which seem to have no injurious effect upon the peritoneum, and yet, again, there are other forms most virulent in their action. As it is impossible to say in a given case what the character of the pus may be, I keep on the safe side and drain. One word in reference to closing the abdominal wound: To guard against ventral hernia I use four sutures to every inch, taking the precaution to include in the stitches the sheath of the rectus muscle. In some of my late cases I have adopted the plan of stitching the aponeurosis separately before tying the deep sutures, which in-

clude all the tissues. I shall use this method in the future, believing that I may thus very greatly reduce the dangers of hernia. The integrity of the abdominal wall depends upon the aponeurosis, and unless it be properly united a hernia is almost certain to result. As to the after-treatment in cases in which drainage has been employed, the greatest care should be used to guard against septic infection through the tube. The syringe is to be kept in a solution of soda when not in use, and, just before using, boiling water is employed to render it aseptic. In passing the nozzle of the syringe down to the bottom of the tube, the first must not come in contact with the opening or side of the tube, since, unless this precaution be taken, there is always danger of infection.

The question of diet and drink following section is of very great importance. I never allow anything to be taken by the mouth as long as there is any irritability of the stomach remaining from the anæsthetic. Should the patient complain of thirst, from four to six ounces of warm water are given per rectum and repeated as often as it is necessary. I begin to allow fluids by the mouth generally in from twelve to twenty-four hours after the operation. I most earnestly condemn the use of anything given by the mouth to arrest the irritability of the stomach following abdominal section. What nature needs is rest, and the irrational plan of flooding the organ with all sorts of remedies only serves to make worse the condition already existing. No food is given for twenty-four hours following the operation, at which time, if the stomach be quiet, I allow the patient to have liquid diet. I am very partial to koumyss, as it is liked and agrees with most cases; any light broth may, however, be given. Milk should not be taken unless peptonized, as it is very apt to give rise to the formation of gas in the intestines. As a drink, a siphon of soda-water is very agreeable to patients, and I always order it for that purpose. I allow no solid food to be given until the bowels are moved; after which, I allow my patients anything they may desire, provided it is not in itself liable to disorder digestion.

My experience has led me to believe in the advantages of early emptying the alimentary canal. To accomplish this I begin the use of salts twenty-four hours after section, if the stomach be quiet. In cases in which the stomach is unable to bear the salts I employ calomel in quarter-grain doses every half-hour. The importance of emptying the bowels as soon as possible after section is often overlooked. In cases in which we have pus or fæcal extravasations, early evacuation of the bowels, as a prophylactic measure against sepsis, is of the greatest value. In ordinary cases, also, adhesions between loops of intestines or between the gut and the pedicle stump are much less likely to occur if the bowels are kept

in an active state; and finally, my experience has taught me that all patients make a more rapid and satisfactory recovery if the bowels be emptied early.

I use silkworm gut for suturing the abdomen. It is readily made aseptic, is easier to tie, and is less irritating than any other material I have employed. One of the objections which have been urged against this suture is that it is stiff and hard to tie. This is true unless the gut is properly softened before being used. It should be put in boiling water before the operation, and when used it will be found soft and pliable. It is, however, liable to become rotten if placed in boiling water several times. I therefore prepare only what I require for an operation, and if any is left over I throw it away. It is my practice to remove the stitches in the abdominal wall at the end of the first week. By that time they are no longer of use, and furthermore, I find that unless they are removed at that time, the patients complain of a stinging sensation in the wound, which is at once relieved upon their removal. After the removal of the abdominal sutures I support the incision with a single strip of adhesive plaster, placing directly over the wound a piece of lint to keep it from being irritated.

While the patient is in bed, and especially after she is up and about, she should wear a properly fitting bandage. This should be made of Canton flannel, and cut so that it will fit closely to the figure, being held securely by straps. I always instruct my patients to wear this supporter for one year. A bandage cannot ordinarily maintain in apposition the lips of the incision or prevent the formation of a ventral hernia, but I believe it is of service for that purpose when any great strain is put upon the abdominal walls. Patients should not be allowed to get out of bed too soon. Three weeks is sufficiently early, and I earnestly condemn the practice of sending patients home in two weeks after section. Our object in doing abdominal sections is to cure our patients and not simply to make additions to our statistics. It is a mistake to keep a patient lying too long upon her back. My rule is, in cases not requiring drainage or the extra-peritoneal treatment of a stump, to change the position from the back to the side after the first twenty-four hours. I do not mean by this that the patient is allowed to roll from side to side at will, but to have the nurse place her hands under the shoulder and hip and slip a soft pillow beneath the patient, so that the body rests upon the opposite side. After some little time, the pillow can be removed and placed under the opposite side of the body; thus the patient can be kept very comfortable. In one week after section, I allow my patients to assume a half-sitting position in bed. I feel certain that by following this plan my cases make quicker

recoveries, and as there is no reason for doing otherwise, except, perhaps, that of custom, it seems to me more sensible to take advantage of the golden rule of surgery, which teaches us to look after the comfort of our cases.

As regards the use of opium in the after-treatment of abdominal and pelvic cases, I firmly believe the drug has no place even for consideration under these circumstances. It has alone done more harm in the surgery of the abdomen than even unskilful operators or faulty technique; but those who still cling to this relic of the Dark Ages cry out, "What are we to do with those cases which suffer with severe pain following section?" My answer to them is, "Let them suffer, if opium alone can relieve." Our duty is to save life, not to allow a sentiment of sympathy to control our judgment and thereby cause death. A surgeon whose judgment is controlled by his sympathies should never use a knife, for he is more dangerous under these circumstances to his patient than a poisoned arrow. Those who confide themselves to our care ask for life, not for tears. When we look about us and see the daily and weekly sacrifice of life to the use of opium, we may well feel sorry for ourselves and envious of the next generation, when the entire profession will appreciate the pathology and treatment of such conditions as peritonitis, appendicitis, and like affections.

SOME EARLY PSYCHICAL SYMPTOMS OF TRAUMATIC BRAIN INJURIES.¹

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THE department of neurology in the practice of medicine has attained such proportions that it would be almost impossible in the limits of a single paper to give any complete history of the advances of even one year. In this country there are six large journals devoted exclusively to this branch—five quarterlies and one monthly, viz.: *The Journal of Insanity*, *The Alienist and Neurologist*, *The Journal of Psychology*, *The Journal of Mental and Nervous Diseases*, *The Journal of Inebriety* and *The Review of Insanity and Nervous Diseases*. Abroad, the periodical literature is more voluminous, and books and pamphlets follow each other rapidly. A neurological library of to-day, to be complete, would include thousands of volumes and pamphlets. This would be exclusive of the literature which appears in the general journals, comprising records of cases, theories and discussions of diseases of the brain and nervous system.

The different fields of neurology have been studied

until the specialists find it almost impossible to master more than a single phase of the subject. The lunacy specialists, the specialists of nervous diseases, the specialists of alcohol and drug-diseases, the specialists of idiocy and congenital diseases, the experimenter and teacher of psychology, and the electrician are all examples. The unknown regions of the physiology and pathology of the brain and nervous system are attracting an increasing number of most ardent students, and already the discoveries are very numerous and startling, and the process of learning and unlearning is more and more difficult.

In the department of medical jurisprudence progress and change are less rapid. Seven medico-legal societies and one large quarterly present the many practical topics which are constantly arising. The confusion of theory and practice in both law and medicine, relating to questions of crime and responsibility, has given rise to many strange conceptions of the teachings of science. Thus, from the text-books and legal rulings of judges, the lines of sanity and insanity are laid down as absolute facts. Free will and accountability, judgment, punishment, equity, brain control and capacity, are theoretically regarded as settled facts. All these questions constitute a realm of the densest superstition and error that will continue until this subject is studied scientifically. To-day, the student of medical jurisprudence must pursue his studies above all present theories, text-books and rulings of law. The questions of motive and human conduct must be decided from a knowledge of natural laws of physiological and psychological growth. Science calls for a great revolution and evolution in the medico-legal solution of many of the disputed questions of to-day. The insane, the inebriate, the defectives of all grades and conditions, and the tramp and criminal, can never be restrained or prevented from being sources of peril to all law and order, by theory, or metaphysical abstractions of mind, or legal rulings. Medical jurisprudence of the future must depend on the progress of scientific medicine.

Both neurology and medical jurisprudence are largely influenced by the neurotic element of American civilization. This is a tremendous factor in degeneration and disease, and enters into all degrees of life and living. The family physician and general practitioner are most favorably situated to become the earliest and most accurate students of most of these confusing problems in neurology and jurisprudence. Every year it becomes more and more apparent that the failure to recognize the early symptoms of brain-degeneration and disease constantly increases the army of incurables. The crowded insane asylums, almshouses, jails and hospitals all refer back to early neglect and failure to

¹ Read before the Section of Neurology, American Medical Association, May, 1891.

recognize and apply the means of prevention and cure. A clearer knowledge of neurology would point to conditions and methods of treatment that could be successfully applied at that time only. An outline of some of these early stages is the central topic of this paper.

There is probably no one disease more often mistaken in its early stages than general paralysis. Even after the symptoms have become apparent, there are confusing halts and a delusive masking of symptoms that often puzzle even experts. A long formative stage precedes the well-defined symptoms, beginning in slight changes of conduct and character, elation of spirits, increased activity of the intellect; the disposition, the manner, the temper, the habits and general character all become altered. Then come acts and words that are unusual; the friends and associates are conscious of some change which they seek to remedy by moral advice. Finally, when some reckless conduct or strange disposition is manifest, the physician is called and the disease is clearly made out. To the patient, this has no foundation in fact, and sometimes the physician joins in this belief, and explains these changes of mind and conduct from some moral basis. Symptoms of alcoholic and sexual excesses are explained in the same way. After a period, in many cases extending over months and years, the nature of the disease is above all question, and beyond all medical skill. This formative stage has been attended by distress, loss, sorrow and most serious blunders. In some cases, criminal acts and sad domestic and pecuniary afflictions have marked this period. If the family physician had made an early diagnosis, and the treatment been based on this, a different history and result would have followed.

Some of the ataxies have a similar obscure, early stage, marked by psychical disturbances which are regarded as moral lapses. Nearly all forms of insanity begin with this obscure failure of the higher brain centres. Early changes of temper, conduct and character, defects of emotional control, defects of reason, slight and obscure at first, are clearly the oncoming shadows of disease that should be anticipated and pointed out. These changes and early symptoms are not new to science, but in most cases they are overlooked and seldom receive the attention they deserve.

There is a class of symptoms that is already becoming the centre of serious controversy. Such symptoms are not only not recognized in the early stages, but are sharply disputed by both laymen and physicians. I refer to the alcoholic, opium and other drug-symptoms, which are affirmed to be purely vicious acts and the voluntary giving way to the lower animal impulses. Public opinion has

sought to control them by fine and imprisonment. The medical profession accepts this view, only asserting that after a time the use of these drugs brings on diseased states. The impulsive desire for alcohol and other narcotic drugs is always a symptom of some form of brain-palsy. There are two classes of cases in which this fact seems very clear. The first class includes cases with a history of a distinct traumatism—noticeably, sunstroke, blows on the head, profound wasting illness and severe injury of any kind. Recovery follows, but with it appear changes of temper, character and emotions, and then comes the drink-impulse or the use of some form of opium. These drugs cover up other changes and are interpreted as the cause of all subsequent degeneration and disease. Many of these cases die of pneumonia or some other acute disease, others go on to insanity and become inmates of asylums, while the majority remain as common drunkards or inebriates, slowly growing worse year after year. They are treated as low, voluntary inebriates, despised, persecuted and punished; and die the types of wretchedness and misery, frequently leaving defective families that are always burdens to the world.

Cases belonging to the second class of inebriates or drug-takers have a distinct history of psychical traumatism. A man, previously temperate and well, will have a history of profound mental shock, such as sudden, overwhelming grief at the loss of wife, or children, or property, or of failure to realize some absorbing ambition, or of some calamity causing great distress. His entire character and disposition will change, and the drink-impulse will, without any cause, appear suddenly and continue persistently. Several instances have been noted in which the effect of a railroad accident, as a result of which no external injury was produced, was the beginning of the drink-impulse. The sense of sudden fear seemed to so paralyze the brain as to demand alcohol or opium ever after. In these cases, alcohol may be taken at first as a medicine and in moderation, but the degeneration which calls for it is apparent when efforts are made to discontinue its use. Another class of cases shows these symptoms equally marked; thus, persons who fill positions of great care, of business or professional responsibility, and also persons who are most active in business in the prime of life, previously temperate—will suddenly begin to take spirits and rapidly become excessive drinkers, and defenders of its value as a medicine. Such cases are soon incapacitated and die. The drink-symptom is always treated as a moral condition in these cases.

In the first class of physical traumatism, some form of brain-degeneration is apparent in this morbid desire for alcohol and opium. The beginning

and progress of the case confirm this. In the second class of psychical traumatism, a brain-palsy and sudden perversion of brain function and activity take place, and the demand for alcohol and opium is the expression of this state. In the third class, the use of spirits is a symptom of exhaustion and general brain-failure. All these forms of palsy and degeneration are rapidly intensified by the chemical action of the spirit or drug used.

The pathological condition which calls for relief by these drugs has a uniform order of events: beginning at a certain point and passing down, marked by a regular succession of symptoms, reaching a certain termination that rarely varies. The drink-craze is a symptom which should never be misinterpreted or overlooked. Anyone who persists in using alcohol or opium to excess is suffering from brain-degeneration and disease, which requires medical study and care. The use of alcohol or other drugs is, in a certain number of cases, a marked-symptom of insanity. This fact has been noted for many years; the abuse generally occurs in neurotics who, after some great strain or mental perturbation, become excessive users of spirits, and continuously or at intervals stupefy themselves with such drugs. When arrested and deprived of spirits in jails, acute mania or melancholy follows; then it appears that the spirit- and drug-craze were only symptoms of insanity concealed and masked by the spirits. The facts in this direction are numerous and startling, and unknown except to the few students who are at work in this field. Scientific study has established this fact, viz.: that the "drink-craze" (meaning the impulsive, unreasoning desire for spirits or narcotics) is a symptom of disease. Whether this is so in all cases at the beginning is not yet established; yet nothing can be more certain than this, that the use of spirits will cause disease and disease conditions in all cases. Another fact is becoming more prominent, that the number of inebriates of all forms is increasing; and with it the army of neurotics and defectives is likewise rapidly growing larger. The problems of causation, prevention and cure are still involved in the realms of obscurity and quackery. Great parties and numerous societies are attempting its solution from the moral side alone.

As a scientific problem it is practically unknown, and yet no question of modern times is so eminently one of causes and conditions that are tangible and within the range of science to understand. The neurologist must point out the road and stimulate the family physician to study these early psychical symptoms, which, like signal-flags of distress, are becoming more apparent. Scientifically, the abnormality of an increasing army of neurotics and suicidal drug-takers, who receive no care or medical

attention until their condition becomes chronic, is a reflection on modern medicine. Over five millions of laymen in this country are agitating the question of means and remedies to check this disease. Of the sixty thousand physicians, less than a hundred have given any special attention to the cure and prevention of this wide-reaching malady. The specialists can study these cases in asylums, but the family physician must be the scientific student to point out the early causes and remedies. The drink-problem can never be solved except by physiological and psychological study. This must begin with heredity, growth, nutrition, culture, surroundings and all the phenomena of life. The early psychical symptoms must also be studied, the traumatisms, the beginnings of pathological changes that manifest themselves in the drink-impulse.

This is the path along which science must seek the solution of this problem. The temperance agitator and reformer must give way to the physician. The roar and conflict of parties and societies will die away, and only the voice of science will be heard. Then the armies of inebriates, criminals and insane will be halted, disbanded and forced back to health and rational living. The inebriates will be protected and housed. The saloon will disappear, and alcohol will be unknown. This will be a reality when medical men take up this study from a purely scientific point of view.

A CASE OF TABES DORSALIS WITH UNUSUAL SYMPTOMS.

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ALTHOUGH so much has been written on tabes dorsalis that its cardinal symptoms are familiar to every educated physician, the disease not rarely passes unrecognized years after its onset. As a rule, the patient has no suspicion of the sinister meaning of the earlier symptoms, and when he consults a physician some one of the very numerous special features of the disease may be so pronounced that its true nature is entirely overlooked. Although the classical type of the disease is well known, reports of individual cases are not without value.

Mrs. L. F., aged forty-seven, a housekeeper, had had two miscarriages; finally bearing one living child that died at eight months. The family history is negative, and there is no venereal history.

About three weeks before I saw her, she had consulted Dr. L. C. Brasher for an attack of colic, setting in suddenly and attended with severe pain referred to the umbilical region. There was vomiting, but no diarrhoea. The attack lasted two days and was accompanied by elevation of temperature.

There appeared to be no sufficient cause for the attack. Subsequently the patient stated that she was subject to rheumatic pains in the legs, sudden and sharp in character. According to her statement, the attacks of pain were usually preceded by chills, accompanied by fever and followed by sweating. She had recently been alarmed by a sudden, involuntary drawing-up of the knees, attended with stabbing pain "like string-halt in a horse." On account of these nervous symptoms, Dr. Brasher kindly brought her to me.

Inquiry disclosed that in about four years she had fallen in weight from 137 to 96 pounds, and that her "rheumatism" had troubled her for about the same time. Her appearance was suggestive of phthisis, but the heart and lungs were normal. The knee-jerks were absolutely gone. Standing with the feet together and the eyes closed, great unsteadiness was at once apparent, the patient falling unless supported. The pupils did not react to light, but reacted well with accommodative effort. There was decided awkwardness, but no true ataxia, of the arms. The movements of the legs were uncertain and lacking in precision, unless guided by the eyes. The gait was ataxic. Irregular movements of the toes and of the tendons on the dorsal surface of the foot indicated great uncertainty as to the relation of the foot to the floor. The inside of the foot and the great toe especially were not properly applied to the floor. There was no distinct paralysis. The plantar reflex and the superficial reflexes generally were active. In the lower limbs the touch-sense and pain-sense were not impaired, but localization, as tested by the calipers, was imperfect. On the outer side of the big and little toes the application of cold gave rise to a sensation of heat. The sense of posture was good.

The acuity of central vision was almost normal—⁵/_{VI} in each eye. The ophthalmoscope revealed no change in the fundus of either eye. The visual fields for white were slightly but distinctly contracted, and the right field for green was irregular. Central color-vision, as tested by Snellen's equally illuminated colored letters on a neutral background, was normal. There was no ptosis or other insufficiency of the ocular muscles.

Hearing: right, ³⁰/_{LX}, bone conduction impaired; left, watch heard only when pressed against the auricle, but bone conduction only moderately impaired, the defect being principally due to injury of the drum. The sense of smell is absent, though stated as formerly good.

Occasionally there is some difficulty in passing urine, the flow being sluggish, so that a long time is required to empty the bladder. The urine is normal. The skin is harsh and dry.

Nitrate of silver was prescribed; in a few weeks the patient returned, reporting an entire absence of the "string-halt" symptom and comparative freedom from the stabbing pains; but a new and curious symptom had appeared. In standing or walking, both knees suddenly give way, and the patient makes an involuntary and rather comical bow, im-

mediately recovering her position. She is at times seized with general tremor, attended with this painless doubling-up of the knees. On the whole, the nitrate of silver seemed to have done good.

In this case there can be no doubt as to the diagnosis. The lancinating pains, the loss of knee-jerk, the Argyll-Robertson pupil, the swaying with closed eyes, and the ataxic gait, form a clinical picture that is complete and unmistakable. It is not necessary to speak of the points of differential diagnosis. The disease is often overlooked, not from a want of knowledge of the points of differential diagnosis, but because its first clinical appearance is obscure and ill-defined. Thus, the abdominal cramps and vomiting, for which the patient sought medical advice, were indistinguishable from gastric or intestinal crises, except by the rise in temperature, which does not occur in the crises of tabes; yet such attacks hardly suggest tabes in one case out of a hundred. When the pains become severe enough to attract attention, they are commonly supposed to be rheumatic or neuralgic. The chill, fever and sweating, said to have been associated with the pains, would in many localities be regarded as malarial; inquiry developed the fact that the chill was merely a sense of chilliness, and that the sweating was at least partly due to hot bottles used to relieve the pain. There was no opportunity to measure the fever with a thermometer.

When failing vision is the first symptom, it is easy to ascribe it to presbyopia and to disregard it until the atrophy of the optic nerve is far advanced. Fortunately the ophthalmologist is alive to the diagnostic importance of atrophy of the optic nerve in relation to degenerative processes in the central nervous system. The ear is more or less diseased in a majority of tabetics, while laryngeal palsies¹ or crises are not rare; so that the patient may first consult an aurist or laryngologist. More rarely a perforating ulcer or trophic joint-disease, or an eruption of herpes or pemphigus,² may give the case a surgical or dermatological aspect.

With all of these avenues of error we must constantly be on our guard. The only way to avoid mistake is to examine all cases thoroughly. The habitual testing of the knee-jerk and allied phenomena would not only prevent tabes passing unrecognized, but would often lead to the early detection of other nervous diseases. It is especially necessary in cases supposed to have chronic rheumatism.

In cases of failing vision, not explicable by errors of refraction, ophthalmoscopic examination should never be omitted. Gray degeneration of the nerve

¹ Marina: Zur Symptomatologie d. Tabes Dorsalis, Arch. f. Psychiatrie, xx. 1.

² Buzzard: Diseases of the Nervous System, chap. viii.

is alone sufficient to render tabes probable. Mapping the visual fields is of diagnostic value in many forms of nervous disease, and should not be omitted in tabes, even when vision seems to be unaffected. Changes in the field for white and for colors will reveal incipient atrophy before there is loss of central vision or confusion of colors, and even before an expert with the ophthalmoscope can be sure of any change in the appearance of the nerve.

The sudden involuntary movement and sudden weakness of the legs in the case here reported are worthy of attention. Gowers¹ says: "A sudden, sharp pain may be accompanied by a sudden reflex, spasmodic movement of the legs or by inhibitory weakness. In one case sudden pain would often make the patient fall on his knees." This spasmodic movement is doubtless dependent upon the same cause as the exaggeration of the superficial reflexes, namely, irritation of sensory fibres. The sudden giving way of the legs was first described, I believe, by Buzzard. In his admirable lecture on "Little-Recognized Phases of Tabes Dorsalis"² he cites four cases of his own in which it occurred, and in one of them it was the only symptom for which the patient sought relief. It can hardly be, however, as he states, "of very common occurrence." Marina³ found it in but one of forty carefully observed cases. Gowers speaks of it as an inhibitory effect of pain, but in three of Buzzard's cases it appears that it was not associated with pain, and in my case it was not. Possibly, as has been suggested, there are other afferent fibres than those conducting strictly sensory impulses, irritation of which may inhibit muscular action.

The fact that both sudden spasmodic action and sudden paralysis occurred in this patient makes it probable that both depend upon the same condition.

ORIGINAL LECTURES.

SKIN-GRAFTING.

A Lecture delivered at the Philadelphia Hospital.

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LECTURE I.

GENTLEMEN: Before you is a patient who had an indolent and ugly ulcer of the leg, one of that class of patients that haunt the hospitals, and make the surgeon despair, because all that could be done for them had been done. These cases, which resist the best efforts, are just those which should be taken up and if possible cured, for they are surgical cases, and there is no

problem which should be given up as impossible of solution. I have told you what these ulcers are and what must of necessity be done in order to heal them. You know they are generally due to varicose veins, that have so distended the tissues and altered their nutrition as to cause the surface of the skin to slough; the skin having fallen off, there is a solution of continuity, which readily becomes infected. Granulation-cells develop on the surface and Nature tries to heal the parts, but being ill supplied with blood, they are destroyed by microorganisms, and a foul appearance of the surface is the result. After giving the required tonic, the foul cells should be removed by scraping the parts, thus leaving a healthy bleeding surface that should be protected from the atmosphere, and hæmostasis or stoppage of the blood permitted, thus preventing germs from gaining access. Then you will have a surface covered with healthy granulations. That being the case, all that is required for permanent cure is to clothe the surface with epithelium. You know that a little epithelium placed on an ulcer, if the parts are prepared, will grow and form a small island, which will spread in all directions, forming new sources of epithelium, which would have to start from the edges of the ulcer had nothing been done. Success having followed the surgeon's efforts, it was evident that if a small piece would spread, a large piece, the conditions being equal, would do likewise. Now, instead of taking a small bit of epithelium, we take as large a piece as we choose, and cover the whole ulceration with this, the parts first having been prepared, and hope that it will adhere to the subjacent structure.

You saw how I covered nearly the whole surface of the ulcer with epithelium. The epithelium was taken from the outside of the thigh. The place has healed beautifully; the epithelium has been restored; it has spread from the side and covered the whole surface that was made bare; but this is more intensely red than the rest, and shows a trace of having been tampered with. That is so, but there is a reason for it: the bloodvessels are nearer the surface here than in the surrounding skin. There is less of an epithelial covering here than there, but sufficient to cover the surface—about the same amount that would exist about the mouth, where, as you know, the mucous membrane resembles the skin, minus the horny layer; but the patient will not be deprived of this horny layer, as there will be a continued irritation of these spots, and in the course of a year, instead of remaining red, they will become thicker from the continual irritation. Not only that, but, very curious to say, the condition of these epithelial cells will be slightly altered, as a result of which pigment will be deposited, and, instead of being rosy, the surface will have a brownish appearance. Therefore do not hesitate to remove epithelium, but remove as large a piece as you wish; it will always grow again if you use aseptic measures and prevent the entrance of microorganisms.

Now for the ulcer itself. The dressing was left during two weeks, until a few days ago, and on being removed we found pretty nearly the same condition as you will see here now. All of you who have seen this ulcer will remember that it presented an ugly appearance; now it is still uncovered by epithelium in some places, but more than four-fifths of its surface

¹ Diseases of the Nervous System, Am. ed., p. 292.

² Op. cit., Lecture XV.

³ Op. cit.

have practically healed. It has not the two layers of epithelium found in mucous membranes, still less the three layers of the skin, but only the beginning, the lowermost layer of epithelium. This layer is transparent, and you can almost see the granulations beneath, but still it is here. There are some islands that are perfectly clear, and here the epithelium is as clear as on the surface of the gum. None of you will tell me that the gum is ulcerated, and this ulcer has as much epithelium as is on the surface of the gum.

The point to which I wish to call your attention is this: Here is a perfectly sterile wound; there is no suppuration; all granulations are doing their duty, that is, building fibrous tissue; a delicate layer of epithelium covers the surface of the ulcer; practically, it is healed, and there is nothing more to do with it. All the epithelium has engrafted itself upon the underlying granulations, and the whole surface is protected from the atmosphere by this very delicate layer of epithelium. What should be done at present, in order to give this patient the fullest chance of a perfect result? Nothing but keep him in bed and keep this covered with a sterilized dressing, because, delicate as this covering is at present, it would be possible that a little excoriation would open many mouths to receive germs from the atmosphere and cause infection of the part. Therefore, the precaution to take is to place a sterilized dressing on the part and leave the patient alone for a week or two, and by that time the skin will have thickened, and there will be the same appearance as we saw upon the thigh.

Now that you have looked at this, I wish to call your attention to another point. Remember, when you graft, that all you can hope to have grow must have life. As we know, the surface layer of epithelium is not alive; it is dead, horny epithelium; it receives no nutrition from the vessels below; it falls off as dandruff; we cannot expect this to grow. Hence, do not be surprised, when you remove the dressing, to be faced with the fact that the procedure seems to be a failure. It looks as if the whole graft is coming off as a pellicle. No! the lowermost layer does plant itself on the underlying structures, and it is only the horny layer that comes off. When I take a graft I leave the fibrous layer below, and I know I have cut to the papillary layer because I have hæmorrhage. I know I have gone deeply enough to cut the top ends of the capillaries, therefore I transplant all above the fibrous layer. When implanted, the deeper layer proliferates and gradually pushes off the superficial layer, and this falls off; the cells are too far away from the bloodvessels to receive nutrition. Remember, therefore: you must expect this horny layer to fall off, because it is dead. What grow are the epithelial cells in the papillary layer and the mucous layer of Malpighius.

This patient was brought before you two weeks ago, suffering with a keloid. He is an epileptic, and in one of his attacks grasped a steam-pipe and burned the palmar surface of the hand and thumb. You know the great tendency of a burned surface to develop a keloid, which is simply a scar that does not stop growing. Here you have injured yourself and the wound heals, because a scar forms on the surface and it stops there; but it does not always end so; sometimes a hard tumor grows where there ought to have been a soft scar.

That was this man's condition; he had a keloid on this surface. It did what cicatricial tissue does everywhere else, and the tendency was for the man's thumb to be drawn into the hand and to be bound down. The keloid was also growing on the palmar aspect of the fingers. Looking at it from that standpoint, and knowing that the man would simply be losing the use of the thumb, the indication was to remove the growth and treat the wound as if it were a simple ulcer.

I removed the growth thoroughly and the skin for half an inch about it, laying bare the adductor pollicis and flexor brevis pollicis. Here was muscular tissue laid bare, and we could not expect epithelium to grow on muscular tissue. What was to be done? Simply leave the patient alone until the surface should develop granulations, and then graft. A week after having removed this keloid, we proceeded to graft the surface as in the case of the ulcer which you have just seen. Here the tissues being plentifully supplied with blood, and being perfectly healthy—not diseased as the leg was—there was less trouble in getting perfect union, every graft "taking," and covering the surface perfectly with epithelium.

You notice a certain darkened appearance of this surface, which you must not mistake, as it is merely a scab. The parts were healthy, and there was a little oozing of serum, which is nothing but liquor sanguinis and fibrin. The water of the serum evaporating, left the scab which you see. Therefore do not be puzzled as to what a scab is: it is simply serum from which the water has been evaporated, leaving the albumin and fibrin and some epithelial cells in the meshes of the fibrin. Here the whole epithelial surface has been restored. Secondly, I wish to draw your attention to these two fingers. You know the tendency of a wound resulting from a burn to contract. These fingers were already turned in, and the tendency was that they would be more and more turned in. Knowing that the tendon was surrounded by fibrous tissue, we stretched the fingers and cut directly down upon the tendon, not separating it entirely, but cutting about three-fourths of it away, leaving the remaining fibres to be kept in apposition by means of suture. Remember, when you wish to perform tenotomy and do not require much stretching, that it is well to leave a few of the fibres which will act as a suture. A splint was put upon the fingers, and the space between the ends of the tendon was filled up with granulations. Here we will have the tendon restored, but much longer than it was before.

UTERINE MYOMATA.

BY E. E. MONTGOMERY, M.D.,
VISITING PHYSICIAN TO THE PHILADELPHIA HOSPITAL.

GENTLEMEN: The first patient I bring before you is a colored woman, who entered the hospital two days ago. I have not, as yet, had an opportunity to examine her. She presents the following history: She says she is sixty years old, and has had twelve children, all dead. Her health has been fairly good, until three years ago, when she noticed an enlargement of the abdomen, which has steadily increased. This enlargement is at times greater than at others; she suffers much pain and distress in the abdomen and particularly in the pelvis.

As the abdomen is exposed, you see that its walls are thin, and through them two irregular projections are visible. The larger projection is on the left side, while the smaller and more distinctly outlined projection is on the right. As we look at the abdominal surface, we see that the skin is striated, showing cicatrices resulting from previous distention; also that the abdominal walls move freely over the subjacent structures. In the examination of a patient presenting such a condition we at once ask ourselves what structures may be involved, and what growths are most likely to occur at the time of life of the patient.

From a study of the case we at once arrive at the conclusion that it is not one of pregnancy, on account of the age of the patient and the peculiar appearance of the tumor, although upon inquiry she informs us that she has not ceased to menstruate, and that she suffers from an irregular bloody discharge. Pregnancy is an exceedingly rare occurrence after fifty years of age, although there are cases on record in which women have become pregnant and given birth to children at as late a period as sixty.

Without further examination we will proceed to discuss the possibilities in the case before us. Besides pregnancy the abdomen might be distended by fibroid tumors; by tumors of the kidneys, ovaries, omentum or alimentary canal. Fibroid tumors are uncommon after the climacteric period, unless they have existed previously. Fibroid tumors are likely to become quiescent or even reduced in size with the occurrence of the menopause. After the cessation of menstruation, ovarian growths are more common than growths of the uterus. Disease of the ovaries and tubes often makes its appearance after menstruation has ceased, but in the majority of such cases the disease is of a malignant character. Tumors of the omentum or of the intestinal tract are also likely to be malignant. That the tumor in the case before us is not one of the kidney is probable from its situation in the lower part of the abdomen, and because the entire mass is somewhat symmetrical, while a renal tumor would be situated to one or the other side of the median line.

What has been said of the character of this abdominal growth does not necessarily preclude the possibility of its belonging to any of the conditions named, excepting that of renal tumor. The enlargement is irregular and somewhat nodular. The larger mass, situated upon the left of the median line, extends above the umbilicus, presenting a convex surface laterally and a sharp margin medially, and is without question a solid tumor. It is freely movable in all directions, and evidently has a small pedicle of considerable length. The tumor on the right side is less movable; it presents a conical projection, recognizable on inspection, and evidently extends downward into the pelvis. Both masses are dense and resistant to such a degree as to scarcely permit us to believe that they are cystic in character. The tumor upon the left, with its sharply defined edge, is certainly not cystic, as a cystic tumor would be likely to be spherical in shape.

We are accustomed to divide the abdomen into different regions by means of arbitrary lines; remembering the viscera that are contained in each region, we can specify the organ from which a peculiar growth originates. The situation of these growths in the lower part

of the abdomen indicates that they have originated from the uterus, the ovaries or the omentum. We would infer that the omentum is not involved, because the tumor is freely movable. Omental growths are generally malignant and do not attain great size without forming firm adhesions to adjacent viscera or surfaces.

Is the growth ovarian in origin? Ovarian growths are usually cystic, although they may be solid, such as fibroma, sarcoma; the contents of colloid or dermoid cysts are thick and viscid, and fluctuation would be indistinct or not discernible. Fibromas of the ovary are usually small in size. Sarcomas do not attain to large size without giving rise to greater or less effusion. Colloid cysts usually form extensive adhesions. For these reasons we are obliged to eliminate the possibility of the growths being ovarian.

By a process of exclusion we are driven to the uterus as the only source of development of the tumors. The finger, introduced into the vagina at a point one inch from the vulva, comes in contact with a hard, dense mass, which fills up the pelvis; the finger can be passed around the mass in every direction; but passes with difficulty between this mass and the symphysis; above the symphysis is felt a small teat-like projection, which we recognize as the remains of the cervix; movement of the tumor on the right side is transmitted to the finger kept in contact with this pelvic mass, demonstrating that both parts belong to the same tumor. Notwithstanding the inference from the age of the patient, we are forced to the diagnosis of uterine fibroid or myoma. Rectal examination enables us to pass a finger over the posterior surface of the tumor, which has made pressure upon the rectum, interfering with the evacuation of the bowels, in this way giving rise to the occasional increase in the size of the abdomen, of which the patient has complained. From the size of the tumor, and from the persistence of the menstrual flow, it is probable that the tumor has existed for a number of years, and had attained considerable growth before it was recognized by the patient or her attendant.

Uterine tumors or fibroids are divided into three classes, according to their situation or relation to the uterus. Thus, we have submucous tumors, which have originated from the inner portion of the uterine walls, and, attaining such size as to be no longer accommodated in their original situations, are pushed into the cavity of the uterus. Attached to the uterine wall by a stalk or pedicle such a tumor is known as a polypus. Situated in one or the other wall, with a broad base, it is called a sessile fibroid. If the tumor has developed from and occupies the greater part of the muscular layer of the uterus, it is known as an interstitial fibroid. Such a tumor may attain considerable size and involve the greater portion of the structure of the uterus. It is quite possible that the tumor upon the right side belongs to this class. Tumors of the third class are known as subperitoneal myomata; they develop in the external muscular layer of the uterus, and in their growth are pushed beneath the peritoneum, and may be attached to the uterus by a pedicle of varying length and thickness. The tumor upon the left side probably belongs to this class. Adhesions sometimes form between such tumors and the abdominal viscera. The peristaltic action of the intestines may cause lengthening or even

separation of the pedicle, so that a mass may be found in the abdomen at some distance from the uterus.

Now, if the tumor is pushed into the cavity of the uterus, suspended by a pedicle, it can readily be removed by grasping it with a pair of volsella forceps and twisting its pedicle until separation takes place; or the pedicle may be severed with a knife, with the galvanic cautery, or with a wire *écraseur*. If an interstitial tumor is present and the cervix can be dilated so that the tumor can be readily reached through it, the wall of the uterus may be incised and the tumor enucleated, partly with the finger and partly by means of Thomas's serrated spoon curette, and then removed. If a tumor is too large to be delivered *en masse*, it may be cut away in parts with the scissors until entirely removed. Such operations, however, are attended with much danger. In the case before you, however, the removal of the mass through the vagina is not feasible, as the tumor is entirely too large. Even were it possible, the removal of a mass constituting a portion of the fundus of the uterus would be attended with too much hæmorrhage to be justifiable.

In such a case is an operation for the removal of the tumor feasible or justifiable? From the level at which the cervix is felt it is evident that it could be drawn out through an abdominal incision and used as a pedicle. Before proceeding, however, to such an operation it is important that the condition of the viscera and secretory organs be carefully examined, as not infrequently, when tumors fill the pelvis, pressure is made upon the ureters, leading to their distention and hydro-nephrosis; indeed, in some cases, the kidneys become sacculated, their pelvis dilated and their parenchyma attenuated. Under such conditions operative interference would be attended with serious complications and the probable death of the patient.

Careful examination will be made, and if an operation seems feasible, and the patient is willing to submit to it, an effort will be made to relieve her of this growth and its consequent distressing symptoms.

MEMORANDUM.

METHODS OF STAINING BACILLI.

BY C. F. GARDINER, M.D.,
OF COLORADO SPRINGS, COL.

THE method of staining bacilli in early cases of lung trouble, when the physical examination shows little or nothing, has now become such a matter of routine with most physicians that it holds a place as an aid to diagnosis as important as that of examining the urine for albumin and casts in diseases of the kidneys; and a rapid and reliable method of staining the sputa, one requiring but a limited number of solutions and simple technique, is valuable not only to the busy practitioner, but especially to the medical examiner for life insurance, who, more than the average physician, has to condense his scientific researches.

Articles have appeared in the journals from time to time upon rapid and easy methods of staining, but so far as I have been able to observe, they all have the objection, either that heat is applied to solutions, or much time and manipulation is required. The following method,

shown me by Dr. T. Mitchell Prudden, College of Physicians and Surgeons, New York City (it first appearing, I believe, in a Swiss medical journal), I have now used here for three years, often several times daily. In my hands it has been most convenient, rapid, and successful, enabling me at times to report upon several cases in a very short time.

Two solutions are made, the first being practically a carbol-fuchsin:

SOLUTION NO. 1.

R.—Fuchsin 15 grains.
Alcohol 2½ drachms.
Carbolic acid (sat. sol.) . . ½ drachm or 30 minims.
Water 2 ounces.

Dissolve the fuchsin in the alcohol by shaking, and to this add the carbolic acid and water.

SOLUTION NO. 2.

R.—Methyl-blue 2 ounces.
Sulphuric acid, C. P. . . . ½ ounce.
Water 1½ ounces.

Dissolve the acid in the water, and when cool add to the methyl-blue. The cover-glass, being prepared as usual, but with rather a thin film of sputa and lightly flamed, is placed for three minutes in solution No. 1, taken out and washed well in water to remove excess of red, then put in solution No. 2 for two minutes, then washed in water and examined. If reddish masses appear after solution No. 2 is used, the specimen can be inserted again in No. 2 for another minute or so. These solutions can be kept in properly labelled bottles ready for use, and will keep unchanged for some months.

Solution No. 1 is apt to have a coating form on the surface if exposed to the air too long.

There is one point to be observed, which is a vital one: only reliable dyes should be used, such, *e.g.*, as Professor Grüber's aniline dyes. In trying other and inferior dyes I have had decided difficulty in making these solutions stain satisfactorily. It may be well to mention that to clearly see tubercle bacilli, a microscope having at least a good one-sixth objective, that, with an Abbe condenser, will magnify from five to six hundred diameters, is a necessity.

[The foregoing is practically what is known as Gabbett's method. The search for bacilli may be further facilitated by adding dilute caustic soda to the sputum and gently heating. In the course of from twenty-four to forty-eight hours the bacilli will have fallen to the bottom. The supernatant fluid is decanted and cover-glass preparations made from the sediment. In this way bacilli may be detected when present in small numbers, and when they might elude detection by another method.—*Editor of THE MEDICAL NEWS.*]

MEDICAL PROGRESS.

American Inventions and Discoveries in Medicine, Surgery, etc.—At the recent celebration of the beginning of the second century of the American patent system, DR. JOHN S. BILLINGS, U. S. A., delivered an address upon American inventions and discoveries in medicine, surgery and practical sanitation. He could learn of but one system of medicine to which a patent had been

granted—Thomsonianism. "The right to practise this system, with a book describing the methods, was sold by the patentee for twenty dollars." Patent medicines, the recipes of which must be furnished, are much less numerous than proprietary medicines, which can be protected by trade-marks and copyright. Between the years 1880 and 1890, 540 patents were granted for medicines.

According to the census of 1880 there were in the United States 592 establishments devoted to the manufacture of drugs and chemicals, the capital invested being \$28,598,458, and the annual value of the product \$38,173,658, while there were 563 establishments devoted to the manufacture of patent medicines and compounds, the capital invested being \$10,620,880, and the annual value of the product \$14,682,494.

"We are a bitters- and pill-taking people. From the commercial and industrial point of view the great importance of patent and proprietary medicines is connected with advertising. The problem is to induce people to pay twenty-five cents for the liver-encouraging, silent-perambulating family pills which cost three cents."

Dr. Billings said further:

"The most important improvements in practical medicine made in the United States have been chiefly in surgery in its various branches. We have led the way in the ligation of some of the larger arteries, in the removal of abdominal tumors, in the treatment of diseases and injuries peculiar to women, in the treatment of spinal affections and of deformities of various kinds. Above all, we were the first to show the uses of anæsthetics—the most important advance in medicine made during the century. In our late war we taught Europe how to build, organize and manage military hospitals; and we formed the best museum in existence illustrating modern military medicine and surgery. Our contributions to medical literature have been many and valuable; and our Government possesses the largest and best working medical library in the world. We have more doctors and more medical schools, in proportion to the population, than any other country, and while this is not good evidence of progress, I am glad to be able to say that the standard of acquirements in medical education has been and is now rising, and our leading medical schools are now being equipped with buildings, with apparatus, with laboratories, and most important of all, with brains, which enable them to give means of practical instruction equal to any to be found elsewhere."—*Boston Med. and Surg. Journ.*, April 9, 1891.

A Case of Pseudo-Syringo-myelia.—At a clinical lecture CHARCOT (*La Semaine Médicale*, May 13, 1891) presented a baker of twenty-three, who was injured by a bullet which entered the body to the right of the seventh cervical vertebra, following which right hemiplegia developed. The bullet was not found. The wound healed kindly, the hemiplegia disappeared, and in two weeks the patient returned to work. Three years subsequently, in lifting a heavy weight, he felt an intense pain in the back, followed by paresis of the right lower extremity. Other symptoms of spasmodic hemi-paraplegia developed. The right upper extremity in turn became involved. The thenar and hypothenar eminences became wasted, the flexors and interossei enfeebled. On the inner

aspect of the forearm the tactile sense was unimpaired, while the perception of heat, cold, and pain were lost. The atrophied muscles presented reactions of degeneration, but no fibrillary twitching. Slight scoliosis existed in the dorsal region. There was no nystagmus or diminution of the visual field. The right pupil was small, but responded to light. The eyeball was retracted. On the left side, below the level of the axilla, was a zone of dysæsthesia. A touch, a puncture, heat and cold were all perceived as painful sensations.

The explanation of the symptoms depends upon the lodgment of the bullet, in the primary accident, in the body of the first or second dorsal vertebra, which, undergoing softening, gave way when the heavy weight was lifted, with consequent compression of the right half of the cord and first pair of dorsal nerves.

Thymolo-acetate of Mercury in the Treatment of Pulmonary Tuberculosis.—TRANJEN, a military surgeon of Bulgaria, makes (*Berliner klin. Wochenschr.*, April 20, 1891) a preliminary report upon the treatment of pulmonary tuberculosis by means of intra-muscular injections of thymolo-acetate of mercury. Three parts of the latter were carefully mixed with forty of liquid paraffin; every seven or ten days fifteen minims of the mixture were injected deeply into the gluteal region. After the second or third injection, unless fever existed, six grains of iodide of potassium were administered thrice daily. One hundred and eleven injections were made in fifty-two cases, mostly out-patients. In two cases stomatitis developed; in others there was considerable pain at the site of injection; otherwise there were no complications. Tranjen thus formulates the conclusions arrived at from his observations: Decided improvement took place in cases of incipient phthisis; in cases not too far advanced, more or less considerable improvement, subjective and objective, resulted; no injurious effects were observed in grave cases. Ewald, at whose clinic most of the observations were made, in a supplementary note admits that the results of the injections in suitable cases were as favorable as from any other method, but admonishes against extravagant expectations from the treatment.

Glycerin-alcohol.—To assure accurate dosage and rapid absorption, PETIT (*Journ. de Méd. de Paris*, March 15, 1891) proposes the following menstruum for the administration of alkaloids, glucosides, and other active medicinal agents:

R.—Glycerini (sp. gr. 1.250 at 66°)	333 parts.
Aquæ destil.	147 "
Alcoholis (95 per cent., q. s. ut fiat at 66°)	1000 "

This mixture may be preserved indefinitely; it does not suffer by evaporation; it is a solvent of most medicaments.

Sterilization of Catgut.—CURTILLET (*Prov. Méd.*, No. 20, 1890) states that catgut can be sterilized by heating for a half-hour in a partially closed glass vessel at a temperature of 284°, gradually increased to 302°, and then placing in absolute alcohol. Catgut thus treated will remain for an indefinite time sterile, strong and pliant.—*Centralblatt für Gynäkol.*, May 9, 1891.

Resopyrin.—By combining resorcin and antipyrin ROUX has obtained a mixture to which he gives the name of resopyrin. It is an odorless body of feebly pungent taste, which crystallizes in colorless, oblique, rhomboidal prisms; it is soluble in 100 parts of alcohol, in ether, and in chloroform, but is scarcely soluble in water.—*Journ. de Méd., de Chir. et de Pharmacol.*, April 20, 1891.

Pharyngitis Due to Pneumonia-cocci.—RENDU (*La Semaine Médicale*, May 13, 1891) has reported the case of a woman, twenty-four years old, who developed an intense pharyngitis after having slept in the same dormitory as three others with pneumonia. A mouse inoculated with some of the saliva died in eighteen hours; its blood and viscera contained large numbers of pneumonia-cocci, which also developed in agar cultures made with blood from the mouse. Several days subsequently, a second case of pharyngitis developed in the same ward; inoculation and cultivation were omitted. Pneumonia-cocci may be found in the saliva in health, but then are not virulent.

Paroxysmal Salivation in General Paralysis.—FÉRÉ (*La Semaine Médicale*, May 13, 1891) reported to the Société de Biologie the case of a man of thirty-nine, with symptoms of general paralysis—bilateral ptosis, inequality of the pupils, right hemiparesis, intellectual enfeeblement, etc.—in the course of which numerous epileptiform attacks, involving the right side of the face and right arm, occurred. Each paroxysm was preceded by profuse salivation, which never took place independently. The salivation was attributed to an irritation similar in character and situation to those upon which the epileptiform seizure depended.

Œdema of the Glottis Following Influenza.—Before the Imperial Society of Medicine of Constantinople, BAVACHI (*Gazette Méd. d'Orient*, April 15, 1891) reported three cases of influenza in which œdema of the glottis developed. One was in a man of fifty, the second in a man of thirty, and the third in a girl of three. The first died, the general condition not being favorable for tracheotomy; the other two recovered without operative interference.

Cholagogue Tablets.—HUCHARD:

R.—Sodii benzoatis }
Sodii salicylatis } of each . . . 1 drachm.
Rhei pulv. }
Ext. nucis vomicæ 5 grains.
Ft. tabellæ no. xx.
Sig.—One at each meal.

—*La Méd. Mod.*, May 7, 1891.

Fumigant for Asthma.—PLANT:

R.—Stramonium leaves } of each . . . 1 ounce.
Green tea }
Lobelia inflata 3 drachms.

Add a saturated solution of potassium nitrate, dry, and preserve in a well-stoppered bottle. A teaspoonful suffices for a fumigation.—*La Sem. Méd.*, April 29, 1891.

Boro-glyceride Cream.—Dissolve one part of boric acid in twenty-four parts of glycerin, and add to the mixture

five parts of lanolin and seventy parts of vaseline; cool and perfume according to taste.

Methods of Making Corrosion Preparations.—In an address before the American Academy of Arts and Sciences, PROFESSOR DWIGHT describes the methods of making corrosion preparations in use in the Harvard Medical School. The object of the method thus named is to preserve the shape of cavities—ducts, vessels, or spaces—by injecting them with a hardening fluid and then destroying the organ with corroding or digesting substances, leaving the cast intact. Three methods are described:

1. The injecting mass is a mixture of resin and white wax colored with paint dissolved in balsam of copaiba. The organ is destroyed by hydrochloric acid and water, and the cast given a gloss and greater strength by pouring over it a solution of gelatin in acetic acid. Different vessels or parts of an organ may by this method be injected in different colors. The objections to it are that it is difficult to carry out, and the preparation is brittle.

2. The use of Woods' fusible metal. This consists of bismuth seven parts, lead four parts, tin two parts, and cadmium one part. It melts at a low temperature, and can usually be injected merely by its weight. The tissues are destroyed by caustic potash. By this method different vessels cannot be made of different colors, and, owing to their weight, the casts in time tend to become distorted.

3. By celloidin, injected cold and slowly, by repeated forcings through a syringe, of which the piston is driven by a screw. This method allows fine and variously colored casts to be made. The soft parts are destroyed by an acid or digesting substance.—*Boston Medical and Surgical Journal*, May 14.

The Operative Treatment of Goitre.—In an inaugural dissertation BALLY reports the results of operation in 77 cases of goitre, treated at the clinic of Socin at Basle, in the period between January, 1887, and September, 1889. Of these 24 were cystic, 24 colloid, 19 mixed, 7 parenchymatous, 1 fibrous, 1 a cystic adenoma, and 1 a foetal adenoma. In one case two operations were performed. Five were treated by puncture and injection, 1 by total extirpation of the thyroid, 14 by partial removal of the gland, and 58 by intra-glandular enucleation. The conclusions arrived at, as a result of a study of these cases and of those reported by others, are as follows: Intra-glandular enucleation of one or several goitrous nodules is usually practicable, excepting in the case of malignant strumæ, diffuse parenchymatous or colloid hypertrophies of the thyroid, exophthalmic goitre and goitres with numerous disseminated nodules; the layer of tissue separating the capsule of the gland from the goitre is readily detectable; hæmorrhage is usually not alarming. In the rare cases in which it becomes alarming, the thyroid vessels may be ligated and partial extirpation performed. Injury of nerve-fibres, and the resulting palsy of the vocal bands, is avoidable. The probability of recurrence is not greater than in the case of partial extirpation. Unfavorable results, as tetany or symptoms of cachexia, were observed in no case, and in none of the cases in which partial extirpation was performed did the tissue left behind disappear.—*Correspondenzblatt für Schweizer Aerzte*, May 1, 1891.

THE MEDICAL NEWS.

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SATURDAY, JUNE 13, 1891.

THE TREATMENT OF EXTRA-UTERINE PREGNANCY BY EXTIRPATION PER VAGINAM.

As the literature of this subject increases it may be observed that, although in the early stages of extra-uterine pregnancy the difficulty of diagnosis does not lessen, the indications for treatment become more clearly defined. As is true of many surgical procedures, the surgeon has learned when and how to operate by imitating Nature's treatment.

From one aspect cases of extra-uterine pregnancy may be divided into acute and chronic; in the former the indication for operation is the immediate saving of life; in the second, the destruction and removal of the foreign body that imperils the patient's existence; both are accomplished by the processes of Nature in a manner which may to advantage be supplemented by the obstetrician.

There can be no question of the duty of operating upon a patient seized with symptoms of rupture of the sac of an extra-uterine foetus; and when these symptoms persist and threaten life, the method of operating by abdominal section admits at present of no criticism.

In cases, however, in which the foetus has grown and developed, the surgeon will do well to adopt

an equally radical but more protracted treatment. Nature waits until the death of the foetus has taken place before attempting to remove the product of conception; when the period of viability has not been attained, and the foetus is so situated that it cannot, without menace to the mother, grow until term, the surgeon may with advantage wait until Nature has ended foetal life.

The removal of the foetus is naturally effected by a process of necrosis in the wall of the foetal sac. This process may even invade the abdominal wall, as illustrated by a remarkable case described by SHEILD at a recent meeting of the Obstetrical Society of London, in which, in a primipara, sloughing of the abdominal wall near the umbilicus occurred, with the protrusion of a foetus nearly at term; other cases, in which the foetus has been discharged piecemeal through tissues near the uterus, have been not infrequently reported. In cases coming under the notice of the obstetrician when foetal death has occurred and the foetus is so situated that its removal by abdominal incision is difficult, it is occasionally justifiable to open the foetal sac, remove its contents, and treat the condition as one would an abscess cavity, by approaching it *per vaginam*. An interesting operation of this sort has recently been reported by FENGER.

The patient was a primipara, and the head of an extra-uterine foetus could be felt through the vagina. After making a median incision through the perineum, to give room, the foetal sac was opened by the cautery, craniotomy was performed upon the head which presented at the opening, and the skull was extracted piecemeal; the body easily followed; the sac was irrigated with boric acid solution and thoroughly drained; the vagina was tamponed with antiseptic gauze, and an antiseptic dressing was kept over the vulva. The placenta, which was attached in the left iliac fossa, came away on the seventeenth day. With continued drainage and antiseptics the patient recovered.

The vaginal operation for these conditions is to be reserved, FENGER remarks, for cases in which the tumor is low in the pelvis, the placental circulation has ceased, and suppuration has begun; it may also be chosen in cases of prolonged extra-uterine pregnancy, when the foetus disintegrates and an attempt is made to discharge it piecemeal. FENGER could distinguish the placental souffle in his case when first examined, but he waited for a week after it had ceased before operating, thus avoiding very

largely the danger of hæmorrhage from the placenta. Cultures were made from the fœtus as soon as it was removed to ascertain the presence or absence of bacteria in the foetal sac: it was found sterile and in a thoroughly aseptic condition.

As our knowledge of the subject increases, indications for operation will become more clear and fatal results less in number. The choice of a method of operation based upon the pathology of each individual case will always be of paramount interest and importance to the obstetrician.

PROFESSOR DACOSTA'S VALEDICTORY.

THE graduating class of 1891 of the Jefferson Medical College enjoyed a unique privilege; they received in an especial and personal sense the deeply significant valedictory of the teacher who for nineteen years had faithfully and brilliantly taught his pupils and the world the mysteries and cure of disease. The address breathes throughout a spirit of almost pathetic tenderness and solicitude for the individual student and worker in medicine, but below all other notes there is the clear, strong, dominant tone of love for medicine in the abstract, for the healing of the world's diseases, and the forefending of the world's ill. In these days, when the old-time courtesies are so apt to be neglected in the furious battle for worldly success; when scientific aims are pursued in disregard of a desirable respect for one's self and one's fellows; when manner and method are forgotten in pursuit of objects and things; when professional success is often prized more than professional ethics, how grateful seem the following words from one who has reached the highest and most honorable success, both worldly and professional:

"As men, I know you wish what all men wish—for friends, for esteem, for worldly success. Yet, if even all these were granted to you, you would not be satisfied, unless with them you had the approval of your conscience in your work. There will be dark days to you, as there will be joyous days; and in those dark days the feeling that you have done right, that you have striven manfully to the best of your ability, that no one has suffered whom you could have relieved, that no life has been lost which greater care could have saved, will be a joy. And the faithfulness and the care are not only of use to those in whose behalf they are exerted, but they also become a help to others, stimulating them to the same. Thus the humblest, the least gifted, may strengthen the resolves of the most self-reliant, the

most gifted. One life reacts on another—its good increases the good in others. . . .

"Only let the fire of science burn within you as a vestal fire. If you do, it will not only benefit others, but will benefit you. When discouraged by drudgery and by long waiting for opportunity; when chilled and choked by battling with pretentious commonplace; when awe-stricken with the power of dense, invincible dulness, it will glow, if you fan it, and warm and cheer you. It has been kindled by a divine spark, and cannot go out while you are true and honorable and keep it alive for pure purposes."

To himself, the teacher *par excellence*, his own words have especial application, and in him striking exemplification:

"If you lead a teacher's life you must accept with it a teacher's duty. One of his duties is to hand down the best traditions of medical life, and to try to do that which in time will add to them. He will, then, not simply instruct; he will do more, he will educate. He must also foster investigation, and be himself an investigator. His love for learning must never weaken: when he ceases to be more than an elder student, he ceases to be fit to be a teacher. A teacher's work does not die with him. It lives long after, and may give great results. . . .

"Through his pupils a teacher lives; the man passes away, the teacher remains in his pupils and becomes part of them. What a thought that they, the lenient judges of his endeavor, the pledges of his aspirations fulfilled, the subsisting signs of his responsibility, transmit his life! What a thought that through them he may influence action for more than one generation; that from his impulse may spring what is far above himself! . . .

"What a stimulus, then, all this is to him who has the aspiration to instruct! And when the hour comes that I shall lay down this robe of teaching, when the time arrives that I address you no more, there will always remain the thought—I say it in all humility—that I shall live in you. I shall be with you in your struggles, shall share with you your successes. At every bedside of distress, at every bedside of hope, we meet again. The teacher is inseparably joined to you, to all his pupils. Awful, ever-present responsibility—constant excitant to truthful arduous effort; and happy he who has been so guided that he has never forgotten his responsibility nor relaxed his exertion; that he has used God's gift of teaching for God's purposes."

WORSE THAN VIVISECTION.

THERE are few things occurring in our modern life more fitted to give one severe moral nausea

than the outrageous facts, none too plainly exposed by a writer in the April number of *The Nineteenth Century*, in a description of the hideous agonies suffered by cattle during their transfer from their prairie homes to the English abattoirs. It is plain that, far from exaggeration, the worst part of the matter is touched as lightly and with as little insistence as possible. It would seem impossible that men and women with the faintest remnants of humanity and kindness yet remaining in their hearts, would, for the saving of a paltry penny or two per pound in their purchase of meat, command such things to be done. But apart from these aspects of the question, one cannot forbear asking what may be the physiological effect of such meat upon the human organism. If the milk of an angry human mother or a sexually excited cow will, in a child, produce very serious illness, what may not be the effect of the eaten flesh of these animals, beaten as they have been, bruised, starved, trodden to death, stifled, the whole organism every moment for weeks a quivering mass of fever, pain and passion? The writer of the article in question thus closes his story:

"It was found impracticable to fatten up range cattle on their arrival in England, and, after a few days' rest, to allow them to recover from their fevered condition: all these cattle were sold for immediate slaughter. They were fat when they left the range; at the end of their month's journey they were not only reduced to mere frames, gaunt and narrow beyond belief of people who have seen cattle only in the fields and farmyards of England, but with their sterns rubbed raw and swollen out of all natural shape, their legs also swollen, and in many cases raw around the fetlocks, and with their hides scored with horn-marks. When one considers the amount of bruising which these external marks represent and the way in which steers had been thrown about in the pens by the motion of the vessel, it is difficult to suppose that any of the little beef that is on them can be healthy human food. I can only suppose it is made into sausages."

It is greatly to the credit of our Government that the Secretary of Agriculture has issued the most stringent and detailed orders, which to some extent, will lessen the horrors of the ocean passage.

FOOD, MORTALITY, AND A PROTECTIVE TARIFF.

PROFESSOR ALBERTONI, of Bologna, demonstrates that there is an intimate and causal relation be-

tween the price of food and mortality. In Europe during the past fifty years vegetable foods have increased in price about 30 per cent., whilst meat has increased 140 per cent. The poor, eating less meat, have less resistance to disease than the better classes. A great number of boys in Turin were weighed, and the poor boy of fourteen weighed about the same as the well-to-do boy of eleven and one-half years. The greater mortality of the poorer classes is clearly traced to insufficient nourishment.

And now comes MR. MATLEKOVITS, who, in a statistical study on the subject, finds, as a result of the protective tariff rates of Austria and Germany, that in these countries the poor man's cereals, his flour and rye bread, have, since 1878, been advanced in price one-third or more. As a result, there is increased mortality and a great increase of crimes both against property and the person.

DOMESTIC SCIENCE AT WELLESLEY COLLEGE.

It has always seemed that a work upon which so much human happiness and well-being depend, and, moreover, a work necessarily devolving upon women, should in female colleges be left to haphazard and whim, instead of being converted into a science and an art. Girls are taught everything but the one important and necessary thing they must do all their lives. Wellesley has at last seen the absurdity and met it by establishing a department of Domestic Science. Although it is only an optional year put at the end of the course, it is still a good beginning in a good work. The lectures cover such subjects as the sanitary conditions of a house, the chemistry of food, cooking, nutrition, proper clothing, the art of housekeeping, domestic economy, etc.

A FOUR-YEARS' COURSE AT THE HARVARD MEDICAL SCHOOL.

HARVARD College has decided to lengthen her course of medical study from three to four years, each of nine months' study. The change will go into effect September, 1892. It is thought that a similar change is under consideration in New York, and if decided upon, the simultaneous action in the three principal cities of the East will, it is hoped, annihilate the two-years' course throughout the country, and spur even the worst laggards to the adoption of a three-years' course, thus greatly advancing the interests of a sound education. American medical education will then cease to be the target of European ridicule.

SOCIETY PROCEEDINGS.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Forty-first Annual Meeting, held at Reading, June 2, 3, 4, and 5, 1891.

[Continued from p. 649.]

WEDNESDAY, JUNE 3D.—SECOND DAY.

THE afternoon session was devoted to the subject of Phthisis. DR. T. J. MAYS, of Philadelphia, read a paper upon "The Treatment of Pulmonary Consumption." He opposed the view that houses in which consumptives have lived are centres of infection, and that the commingling of consumptives is detrimental. He does not believe that consumption is propagated by contagion. He advocated the non-specific or rest treatment, which, when thoroughly carried out, gives excellent results. No chronic disease responds more quickly and satisfactorily to proper treatment than does pulmonary consumption.

DR. HUGH HAMILTON, of Harrisburg, followed with a scientific paper on the "Physiological Behavior of Koch's Remedy," which was illustrated by numerous charts. DR. C. W. DULLES, of Philadelphia, cited instances demonstrating the curability of phthisis, and dwelt upon the importance of treating phthisical patients in suitable institutions. DR. L. F. FLICK, of Philadelphia, insisted upon the value of the specific treatment. He has been using inunctions of iodoform dissolved in olive oil, with most gratifying results.

A resolution, presented by W. B. Ulrich, of Delaware County, authorizing the appointment of a committee of seven to urge the passage by the Legislature of a bill for the appointment of a Board of Medical Examiners, and appropriating \$200 for the expenses of the year, was adopted, and the following committee appointed: Dr. H. G. McCormick, Wyoming; Dr. J. B. Roberts, Philadelphia; Dr. W. S. Foster, Allegheny; Dr. W. M. Weidman, Berks; Dr. C. L. Stevens, Bradford; Dr. J. C. Gable, York; and Dr. J. W. Moore, Northampton.

The Committee on Nominations proposed the following officers for the ensuing year, all of whom were unanimously elected: President, Dr. Samuel L. Kurtz, of Reading; Vice-Presidents, Dr. John B. Roberts, of Philadelphia, Dr. H. G. McCormick, of Williamsport, Dr. H. H. Whitcomb, of Norristown, and Dr. J. C. Gable, of York; Secretary, Dr. W. B. Atkinson, of Philadelphia; Assistant Secretary, Dr. Charles W. Dulles, of Philadelphia; Treasurer, Dr. George B. Dunmire, of Philadelphia. Delegates to attend the meetings of the various medical associations were also elected. The next meeting will be held at Harrisburg, the third week of May, 1892.

THURSDAY, JUNE 4TH.—THIRD DAY.

At the morning session, after the election of a Board of Censors, DR. ALLIS read an address, rich in valuable suggestions, on "Problems in Surgery." He regarded the general practice of operating during shock following injury as wrong. The patient should be permitted to react before any additional risk be incurred by adding to the existing shock.

In injuries of the foot requiring amputation, he advo-

cated removal of the limb just below the knee, in preference to operation upon the foot. He claimed that an artificial limb is of more service than a natural heel. In the treatment of fracture of the neck of the thigh-bone in old persons, the patient should be taken out of bed as soon as possible, and treated as if no fracture existed. In case of the division of a nerve or artery, he suggested the possibility of suture. In the treatment of hydrocephalus or abscess of the brain, he advocated the removal of a section of the skull, and after the evacuation of the fluid the application of a bandage to produce pressure. He would prefer to remove the fluid of hydrocephalus by means of diuretics rather than resort to tapping. This principle of compression in the treatment of abscess cavities would in cases of phthisis apply also to the lungs; he suggested the advisability of resecting the ribs of the affected side, with subsequent application of gentle pressure by means of straps.

DR. PACKARD thought it would be impossible to make it a fixed rule, in all cases of injury of the foot, to amputate below the knee; excellent results can be obtained by preserving the heel, and he would always make an effort to do so. In fracture of the neck of the femur, he has had excellent success from treatment by extension. He believes that aneurism would result from the suturing of divided vessels.

DR. M. PRICE did not believe in waiting until shock is recovered from before operating, save in extreme cases. In injuries of the foot he strongly advocated amputation below the knee. He believed the day is approaching when the skull will be opened to remove clots in apoplexy, as well as to evacuate the contents of abscesses.

DR. E. E. MONTGOMERY, of Philadelphia, read a paper on "Conditions Requiring Abdominal Section Following Parturition." Septicæmia after labor from the formation of pus has caused many deaths. In all such cases he urged early surgical interference, as the most gratifying results follow laparotomy and drainage. A small dermoid cyst of the ovary which has undergone bruising, or has been ruptured by the pressure of the head, is a frequent source of septicæmia. Another frequent cause is the incomplete removal of the membranes, placenta, and clots—which, if not remedied, will result in metritis and inflammation of the peri-uterine tissues, with formation of an abscess. In all septic cases he recommended careful examination of the condition of the uterus; dilatation and thorough curetting of the uterine cavity; when evidences of pus are present, opening the abdomen, cleansing the peritoneal cavity, and drainage. When no source of infection can be detected, an exploratory incision should be made, with puncture of the ovaries, if enlarged, to determine the presence or absence of pus. If the uterine wall is the seat of an abscess, the organ should be removed.

DR. EDWARD JACKSON, of Philadelphia, read a paper on "What to Do for Incipient Cataract." He dwelt upon the influences to which the eyes are exposed in various trades, such as blacksmithing, puddling, and glass-blowing, and recommended the use of dark glasses by those exposed to great heat and brilliant light.

DR. J. A. LIPPINCOTT, of Pittsburg, delivered the address in Ophthalmology, choosing as his theme the subject of "Trachoma," an affection largely prevalent in

orphan asylums, public institutions, and among emigrants.

At the afternoon session DR. J. M. DUFF, of Pittsburg, read the address in Obstetrics. He paid a glowing tribute to the value of asepsis in parturition. A putrefying funis may cause septicæmia in both mother and child, and is frequently the cause of trismus in the latter. Antiseptic treatment of the cord is therefore insisted upon. He objected to the eliminative treatment of septicæmia by means of subcutaneous injections of pilocarpine and large draughts of sterilized sodium chloride solution, as apt to give rise to cardiac collapse. When this method of treatment is adopted it should be supplemented by the use of strychnine. The wet pack is the rational treatment for this condition. The diagnosis of placenta prævia is to be made by external palpation. The Braxton-Hicks method is the best. Post-partum hæmorrhage is best treated by hydrastin, hypodermatic injections of caffeine, and packing the vagina with iodoform gauze. When transfusion is demanded, the injection between the scapulæ of a salt solution, one drachm to a pint, will answer perfectly. In rupture of the uterus, laparotomy is indicated. The curette should never be used after abortion. The placental forceps or the index finger are proper. He called attention to the fact that la grippe had caused a great increase in the number of abortions during this year.

DR. S. SOLIS-COHEN, of Philadelphia, read a paper on "Patent Medicines and Newspapers." He forcibly denounced the popular method of advertising proprietary medicines in daily and other journals, and called upon the editors of such papers to assist in eradicating this palpable evil. He claimed that many a patient has suffered not only an aggravation of his condition but has been hastened into the grave as a result of adopting some method of treatment recommended in the newspaper advertisements.

A paper by DR. C. R. EARLE on "Catarrh" was followed by a paper on "The Pharmacology and Therapeutics of Euphorbia Pilulifera," by DR. JOHN AULDE. Dr. Aulde dwelt largely on the benefit following the use of this drug in cases of asthma and other bronchial affections.

An amendment to the constitution to prevent the publication in the medical journals of abstracts of the addresses read before the annual meeting before the appearance of the *Transactions* of the Association, was defeated on the ground that the interest in the papers would be dead by the time the *Transactions* was published.

FRIDAY, JUNE 5TH.—FOURTH DAY.

The last session of the annual meeting was occupied in the discussion of business matters, no scientific paper being read. The retiring President, Dr. Craig, announced the following appointments:

Committee to visit the Governor and urge the appointment of a female member to the Board of Public Charities in case a vacancy should occur: Dr. W. B. Ulrich, Dr. E. Corson, Dr. S. C. Ayres, Dr. S. J. Raus, and Dr. J. L. Ziegler.

Committee on Pharmacy: Dr. H. A. Hare, Dr. C. W. Bachman, Dr. J. C. Lange, Dr. W. T. Bishop, and Dr. T. J. Mays.

To deliver addresses at the next meeting: On Medicine, Dr. J. H. Musser, Philadelphia; on Surgery, Dr. T. D. Davis, Allegheny; on Mental Diseases, Dr. J. W. Phillips, Delaware; on Obstetrics and Diseases of Children, Dr. H. G. McCormick, Lycoming; on Hygiene, Dr. A. A. Woods, Erie; on Otology, Dr. G. R. Rohrer, Lancaster.

Dr. Craig made a brief address on surrendering the chair to the incoming President, Dr. Samuel L. Kurtz, of Reading, who in a graceful manner expressed his thanks for the honor conferred, saying that he accepted the office as a compliment to the medical profession of Reading and of Berks County.

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, April 7, 1891.

B. SACHS, M.D., IN THE CHAIR.

THE PATHOLOGY OF LANDRY'S PARALYSIS.

DR. HENRY HUN, of Albany, reported the case of an unmarried man, forty-five years old, free from syphilitic or rheumatic taint, who suddenly observed paresis of the legs, which, in the course of four days, progressed to complete paralysis. Following this, the muscles of the trunk, arms, and parts supplied by the bulbar nerves became paretic in the order named, the loss of power becoming more and more decided, until death occurred with the symptoms of bulbar paralysis. The paralysis was purely motor, the sensory nerves not being involved; neither were the sphincters, although paralysis of the abdominal muscles made expulsion of the contents of the viscera difficult or impossible. The only lesions found by careful microscopical examination were the evidences of cerebral and spinal meningitis of recent origin, and a degeneration of some of the fibres of the anterior roots of the cauda equina.

After a careful consideration of the diseases of the nervous system most nearly resembling Landry's paralysis, the conclusion was reached that no evidence had been brought forward which justified the abandonment of the term "acute ascending" or Landry's paralysis. It had not been shown that the cases of the disease, in which no lesion had been discovered, depended on faulty methods of examination, nor had any case clinically typical of Landry's paralysis been reported in which, after death, characteristic lesions were found, either in the central or peripheral nervous system. Acute ascending paralysis, excluding cases in which sensory symptoms were prominent, or in which well-marked bulbar symptoms were absent, must, therefore, be regarded as a clinical entity for which no characteristic lesion has as yet been discovered. That there was some change in the nervous system causing the severe symptoms could not be doubted, but this change was probably of a chemical rather than of an anatomical character. From the many points of resemblance between acute ascending paralysis, myelitis of the anterior horns and multiple neuritis, this chemical change must affect either the motor cells of the spinal cord and medulla or the fibres springing from them; and although this chemical change is so great as to cause an entire arrest of the functions of these cells or fibres, yet it leaves no trace in alteration of character of cell or fibre, no more than does morphia or

strychnia leave in the structure of the nervous system any trace of its fatal action. As to the nature of this supposed chemical poison nothing is known. The general tendency of the present day is to consider it a ptomaine, and indeed the acute course, the fact that it often follows an infectious disease, and that it is associated with enlargement of the spleen, makes it not improbable that Landry's paralysis is a germ disease. In further support of this view is the fact that Centanni and Eisenlohr have each found bacteria in the central nervous system. In neither case were the bacteria cultivated. The case of Centanni was so imperfectly observed during life that the diagnosis was doubtful. In a number of cases, bacteria have been looked for, but were not found, so that the hypothesis that Landry's paralysis is due to bacterial agencies is far from being proven, and the pathology of the disease still remains to be discovered.

DR. IRA VAN GIESON thought Landry's paralysis much more closely associated with cases of acute multiple neuritis and acute poliomyelitis than is generally supposed. Landry, in 1859, first accurately described several cases of ascending paralysis, although several observers had previously referred to the existence of such a disease. The speaker referred to several cases of acute multiple neuritis which have been reported, in which motor symptoms predominated, and in which the whole course of the disease had been in close accord with that of Landry's disease. He also reported several cases of acute poliomyelitis which very closely resembled the disease in question. The clinical resemblance of these diseases is striking. It is well known that multiple neuritis and, poliomyelitis are usually caused by poisons of different kinds, such as the ptomaines resulting from the infectious diseases and from phthisis. Etiologically, Landry's disease seemed to come under the same category as these two diseases. Before a definite conclusion as to the true pathology of Landry's paralysis could be arrived at, a more thorough examination of all the nerve trunks, their branches and terminal filaments would have to be made. Hitherto, such observations had been unsatisfactory, because, for obvious reasons, all the nerves could not be examined. On this account, it should not be concluded that the peripheral nerves are not diseased in Landry's paralysis, as thorough examination may reveal the existence of such a condition. As to the hyaline thrombosis found in the central nervous organs, similar formations follow ptomaine-poisoning, but are not confined to cases of Landry's disease, as they may be present in any case of poisoning.

DR. LEONARD WEBER, some six years ago, reported a typical case of Landry's disease, in which the patient entirely recovered in the course of three months. The symptoms of the disease appeared after a shock sustained in stopping a runaway horse. Dr. Weber did not think that the trauma militated against the theory of intoxication. He was satisfied that if a more thorough examination of the nerves were made in these cases our ideas of the pathology would become more clear.

DR. M. A. STARR thought it a question whether or not the disease was of sufficient duration to be attended with neuritis and degeneration of the peripheral nerves. It is certain that a myelitic process might cause a suspension of function, without causing recognizable microscopical changes. He had never seen a typical case of

Landry's paralysis, but had seen two cases which presented many symptoms of the disease. One was manifestly a case of diphtheritic paralysis, the other a case of beri-beri.

TENNESSEE STATE MEDICAL SOCIETY.

*Fifty-eighth Annual Meeting, held in Nashville,
April 14, 15 and 16, 1891.*

DR. T. J. HAPPEL, of Trenton, said, concerning "Abscesses," that so far as the treatment of the last stages goes, the Latin expression *ubi pus, ibi incisio*, gives us the therapy of such cases in a few words. The prophylactic treatment is a different matter. Everything that can be done to prevent the formation of pus, and the development of an abscess, must be resorted to, but when pus is present the knife is the instrument of relief. An aspirator can remove the pus itself, but the cause of it, the pyogenic something, is left behind. A free outlet must be given to the pus, the cavity carefully cleaned, perfect drainage secured, arrangements made for thoroughly flushing the diseased part with antiseptic fluids, the strength of the patient maintained by a generous diet, and Nature aided by an abundance of pure, fresh air to repair the broken-down constitution.

DR. HAPPEL reported a case of "Abscess of the Spleen." He said this was a rare disorder, many of our best authorities never having met with a case. He had in the course of seventeen years' practice found two cases; one due to pressure upon the organ, and the other to chronic malarial poisoning. He called attention to the peroxide of hydrogen as one of the best, if not the best, of all agents, to cleanse and restore to a normal state all pyogenic membranes, surfaces and cavities. As one writer expressed it: "It hunts out pus in all its ramifications as a ferret does a rat."

After giving a *résumé* of the literature on the subject of "Ovulation and Menstruation," DR. GEORGE R. WEST, of Chattanooga, drew the following conclusions:

1. That the increased familiarity with the pelvic organs, the result of modern surgery, has not materially added to our knowledge of their functions.
2. That though the ovular theory of menstruation has not been overthrown, yet the weight of accumulating evidence seems against it.
3. That the most recent observations point to a common nervous origin for both ovulation and menstruation, and yet an individual independence.

DR. THOMAS M. WOODSON, of Gallatin, contributed a paper entitled "Treatment of Pneumonia; the Past and Present Methods; has the Rate of Mortality been Changed?"

He briefly reviewed the literature on pneumonia to illustrate the opinions of medical teachers and writers. He was glad that Hare, of Philadelphia, in his work on *Practical Therapeutics*, revived the old lines of treatment. He extolled veratrum viride, and said that in the first stage of the disease it is very useful. Its two alkaloids exert different influences and between them they fulfil every object sought for. Jervine, a powerful vasomotor depressant, relaxes the walls of the blood-vessels everywhere; at the same time it quiets the action of the heart by an action upon its muscle or ganglia, reducing its force, thus preventing engorgement of the

lung; while veratroidine, by stimulating the inhibitory nerves of the heart, also slows its beat, fills the ventricles and allays excitement. The advantages of veratrum viride are its completeness and rapidity of action; the fact that it preserves in healthy bloodvessels the blood which may be needed in the crisis, if the disease is not aborted; and its safety is a point largely in its favor. In the second stage, to prevent heart failure by engorgement from over-distention, Dr. Hare, to stimulate the respiratory centres, gives digitalis with strychnine. He thinks alcohol in the second stage is inferior to digitalis, and that carbonate and muriate of ammonia are valuable adjuncts in the second and third stages. For troublesome cough in the later stages he uses opium sparingly, but not in the first stage.

In the first stage of croupous pneumonia the indications, said the speaker, are clear: 1. To control the circulation and diminish the determination of blood to the lungs. 2. To reduce the temperature, if high. 3. Allay pain by both physical and physiological rest. 4. Support the vital powers.

The first two indications are met by veratrum viride better and with more certainty than by any other drug. For the third, to allay pain, we have but one remedy—opium or its derivatives, which stand without rivals. Fourth, to support the patient with especial reference to failing heart and respiratory centres; digitalis, strychnine and alcohol for the later stages.

More than twenty years ago, the speaker expressed the opinion that in inflammatory affections veratrum viride was a sedative of the greatest value, controlling the action of the heart as effectually as blood-letting, without the exhaustion incident to the latter. Arterial excitement is reduced by it, while the vital forces are economized. It is especially adapted to pneumonia in the stage of engorgement in which it appears to bring about prompt resolution. It may with safety be used in the treatment of children. Its constitutional effects having been secured, there are reduced force and frequency of the circulation, reduction of temperature and respiration and an amelioration of all the symptoms of the disease. While extolling the virtue of veratrum viride, he would not rely on it alone in pneumonia, as opium was unquestionably entitled to a prominent place palliative and curative in its action, allaying pain, cough, and nervous irritation, and available in the latter as well as in the early stages.

DR. J. S. CAIN, of Nashville, said that "Chronic Endometritis" and the conditions necessarily allied therewith are the most common as well as the most important diseases with which the gynecologist has to deal. This condition is often a sequel to the acute form of the disease, and grows out of repeated acute attacks. It matters not how or from what source the acute outbreaks originate, whether from catarrhal, specific, traumatic internal or constitutional causes, they are often, but not always, the starting-point from which not only the endometrium but the entire uterine and peri-uterine parenchymatous structures become involved. He would here venture the assertion, that while the changes in structure and function of the lining membrane of the uterus often seem to be the most prominent conditions, and those demanding first and most careful attention, this tissue is probably never chronically diseased

without a corresponding involvement of all the uterine structures. As to treatment, while the curette, as has been said, is a blind instrument and capable of doing harm in careless and incompetent hands, yet for the removal of fungoid vegetations and adenoid degenerations from the endometrium, it affords the surest, speediest and safest means yet devised. Dr. Cain is accustomed to following the curetting by an application of Churchill's tincture of iodine or diluted carbolic acid, as is the usual practice, and always precedes the treatment by a careful washing out of the vagina and uterus with corrosive sublimate, 1:2000.

In cases in which this treatment is not admissible, or when it has failed to afford relief, his next reliance is on the method of Apostoli. This consists in the introduction into the uterine cavity of an electrode insulated to near the point, and connected with the negative pole of the battery, the other pole being connected with a large pad of moistened potter's clay, sponge, or prepared cotton, placed over the abdomen. The current should be employed for from ten to fifteen minutes, about twice a week. The strength of the current will much depend upon the acuteness of the particular case and the susceptibility of the patient to electrical treatment. The chronic cases always require stronger currents. The dosage may be fixed at from ten to three hundred milliampères; in his judgment the minimum is too small to accomplish any good results, and yet physicians with much large experience have had to employ it.

This line of treatment he considers free from many of the objections of others; it is cleanly, free from pain, and exempt from danger. Unlike cauteries and escharotics, it can be limited in its influence, and produces no deleterious effects upon the sound tissues, nor does it, like the curette, leave a raw and exposed surface, to absorb poisons and aseptic matters; while it removes the vegetations it imparts renewed tone and vitality to the diseased organ.

DR. A. J. SWANEY, of Gallatin, contributed a paper on "Retained Placenta in Miscarriage: How Shall We Treat Such Cases?"

He said the dangers from retained placenta in miscarriage were hæmorrhage and septicæmia. When the delivery of the placenta is protracted, ought we still to abstain? Ought we to wait, or interfere actively in order to forestall these dangers which will almost certainly result? Those who favor active interference are Tyler, Smith, Murray, Simpson, Leishman, Mundé, Grandin and many others. The reasons given for active interference are the frequency of these dangers in protracted delivery of the placenta. If the cervix is dilated or patent, Simpson directs immediate interference; if it is not dilated, he dilates it at once. The woman is then anesthetized, the uterus depressed as much as possible by one hand externally, and with the index finger of the other hand he removes the placenta and membranes. If he cannot sufficiently depress the uterus with the hand, he does not hesitate to forcibly drag it down with a double tenaculum fixed in the cervix. Mundé and Grandin go still further, and curette the cavity of the uterus with special instruments made for the loosening of adherent placenta and its removal from the uterus.

The authorities who before interfering counsel waiting for serious complications are just as numerous as

those who advise immediate interference. We mention Ramsbotham, Davis, Burns, Fleetwood, Churchill, Grailey Hewitt and many others. Active intervention does not mean unnecessary interference. Nature is always to be given a chance, but when her efforts are futile, it is but rational to assist her, and this should be done as directed by Mundé—by placing the woman in the left lateral position, and with a dull wire-curette through a Sims speculum removing the placenta or any part of the secundines that may remain. This is far better and easier than the method advised by Simpson of dragging or pressing down the uterus and introducing the finger. The uterine cavity should then be washed out with hot water, slightly carbolized, through a Jameson uterine douche, and this should be repeated every six or eight hours until all fœtor disappears from the lochial discharge.

Hæmorrhage after miscarriage, said the speaker, even when we believe the placenta and secundines have been removed, invariably means retention of a part of the placenta or secundines. Profuse hæmorrhage from this cause may occur for weeks; in such cases we should boldly explore the uterine cavity and remove any offending matter that may be present. In the first twelve weeks of pregnancy, the dangers from hæmorrhage and septicæmia are not so great and the expectant plan is more justifiable. After the third month, it is criminal negligence to wait and subject a woman to the dangers arising from retained placenta, when she can be relieved by an operation, which, if properly done, can do no harm and spares her the risk of hæmorrhage and septic poisoning. In short, the author believing the early removal of the secundines is easy and safe, forthwith guarantees the woman against the dangers of hæmorrhage and sepsis.

DR. J. L. JONES, of Bells, read a paper entitled "Indigo as an Emmenagogue."

His first case was a lady, twenty years of age, who had not menstruated in five months. He had been treating her for three months with the usual remedies, without any effect; he therefore made up his mind to give indigo a trial. He ordered two ounces of indigo and half an ounce of subnitrate of bismuth, well mixed. Of this the patient took one-half teaspoonful, in one-third of a glass of water, three times daily, for nearly four weeks. One day he was sent for in great haste. On his arrival, he found the patient in bed and comfortable. He was told by the mother that her daughter, while walking in the garden, without pain or warning of any kind, began to flow. The gush was followed by a gentle flow, which lasted for only a short time. In five days she was well, and has not suffered from amenorrhœa since. Dr. Jones has since used indigo in thirteen cases, with but one failure, and this proved to be a case of pregnancy.

During the administration of the drug the os uteri becomes soft and patulous, admitting the end of the index finger. There is often a serous discharge from the vagina. The urine becomes brownish-green in color, and its odor bad. The stools are watery and offensive.

Dr. Lasser.—The order of the French Legion of Honor has been conferred upon Dr. Lasser, the General Secretary of the Tenth International Medical Congress.

CORRESPONDENCE.

THE VOTE OF THE MISSOURI STATE MEDICAL ASSOCIATION ON THE THREE-YEARS' COURSE.

To the Editor of THE MEDICAL NEWS,

SIR: Believing that the readers of THE MEDICAL NEWS will be interested in following the struggle for reform in medical education that is going on in this State, I take the liberty of sending a statement of the attitude of the Missouri State Medical Association upon the question. It had been denied that the State supported the more progressive schools in their desire to make the term of study more thorough in accordance with the greater demand upon the practitioner of medicine. At its late session (May 20, 1891), the State Association indorsed the three-years' obligatory course by a practically unanimous vote. The only visible opposition came from a college recently organized in St. Louis, making the eighth in this city. When we consider the fierce competition for students sure to arise among such a throng of colleges in one city, the reason why the last comer desperately opposes increasing the length of the term of study becomes apparent. Hence, the denunciation of such conduct by Secretary Rauch, of the Illinois State Board of Health, as dishonorable, unprofessional, and mercenary. Much indignation was expressed over the failure of the 'Three-years' Bill in the Legislature. Its passage was unanimously recommended by the committees of both Senate and House. The House gave a large vote in favor of it, but the Senate, at the last moment, voted adversely. It was plainly a manipulated vote, and in the teeth of the will of the people.

The outcry of "oppression of the poor young man," as an argument against three years' study, was ridiculed as pure demagoguery—familiar enough in stump speeches, but disgraceful when used by "professors" to obstruct necessary reform in education. May we not ask since what exact date have the youths of America become paupers and demand charity at our hands, even at the expense of suffering humanity, whose anguish they volunteer to study to relieve? It is a slander upon our young men to accuse them of such cowardice and lack of self-respect. It is a crime in the light of our day to try to mislead them as to the true nature of the task they undertake when beginning a medical course. Every intelligent physician knows that medicine can only be learned in the laboratory and clinic—it is a question of time as well as of brains. Three years spent in practical work, under the direction of competent teachers, is little enough time even for the most diligent and gifted students. Were thoroughness of training more generally appreciated in America, we should not at this late day be arguing for a three-years' course in medicine. There is an alarming waste of talent in America from lack of early and sufficient training. As a cure for the evil of badly educated doctors the establishment of State Examining Boards is urged. We must note, first of all, that such a scheme, to be successful, must include restrictions upon the candidates for examination. The Boards cannot have their time wasted by examining all who apply, irrespective of proofs of fitness. In Germany the State Board requires of candi-

dates that they do practical work; that they dissect, demonstrate specimens, take charge of cases—medical, surgical, and obstetrical—writing out the records, etc. The candidate, also, must have already had years of elaborate training. This is the ideal state of things. No wonder Germany is looked upon as the centre of medical science. We cannot hope to attain such perfection in the present, but we can move in that direction, and a long step would be to require of all candidates that they show proof of having taken a graded course of study extending over a term of not less than three years, and in a reputable college; *i. e.*, one having sufficient laboratory and clinical facilities and a competent corps of teachers. Such proof will guarantee that the student has done so much practical work, and will exclude from the examination men who have specially crammed out of books, and who, in a merely verbal or written examination, might make a fair show without having any practical knowledge at all. Yet, as everyone knows, it is just this practical knowledge that makes the doctor.

New York has lately created a State Board of Examiners entirely removed from political influence, and its further efficiency is insured by requiring of applicants for examination that they shall have studied three years in some legally incorporated college. Eight other States make the same condition. In time we hope all the States will have efficient Boards, but there must first be a solid organization of the profession in all the States to insure satisfactory appointments on the Boards. Missouri does not yet possess such an organization throughout all its districts. The State Association is laboring to that end. Respectfully, C. A. TODD, M.D.

St. Louis, Mo.

ACONITE IN ACUTE NEPHRITIS.

To the Editor of THE MEDICAL NEWS,

SIR: On the 21st inst. I was called to see a young married woman, about three months *eniente*, who had been suffering severely for five days with lancinating pains in the region of the kidneys, more particularly of the left. She had passed almost no urine during all that time—what little she had passed looked more like gelatinous mucus tinged with blood than urine. It is strange that the thermometer went up only to 102°. She was quite thirsty, however, and very restless, crying out with agonizing pain all the time.

I gave her Flemming's tincture of aconite, six drops in a glassful of water every three hours, with directions that it be kept up until tingling numbness should be felt, unless relief were obtained short of that effect; but to be discontinued if that effect should be produced, until it had passed off, then to be resumed again if needed. I also had plain hot-water stupes applied over the kidneys, and gave a vegetable cholagogue cathartic. The stupes immediately proved soothing, and the remedies promptly began to relieve all the symptoms. In about twenty-four hours she was entirely relieved and passing plenty of healthy urine. D. W. FOSTER, M.D.

PLAISANCE, LA., May 28, 1891.

NEWS ITEMS.

Michigan State Board of Health.—The annual meeting of the Michigan State Board of Health was held at the Capitol, April 14, 1891. Prof. Fall, Drs. Avery, Hazlewood, Vaughan and Baker were present. Dr. Avery was reelected president.

Dr. Vaughan reported that, at the State Laboratory of Hygiene, he had made analyses of all the different kinds of baking powder found in the market, also of 112 samples of water from different parts of the State, and that he was ready to report the results, with those of his researches on typhoid fever.

Dr. Baker reported that he had worked out the cause of influenza. He said its greatly increased prevalence during the last three months is alarming because so many other diseases follow that disease, and increase after it increases. Those which so increase are consumption, pneumonia, cerebro-spinal meningitis, rheumatism, osteo-myelitis, etc. Influenza seems to bring in its train all of the most important diseases. Dr. Baker explained the causation of influenza. He stated that the germs of influenza are generally, or at all times, present, and the germs of pneumonia, tuberculosis, and of the other specific diseases are somewhat widely disseminated, but that there must be certain coincident meteorological conditions to irritate the throat and air-passages sufficiently to let the germ gain an entrance to the body. These meteorological conditions, in this instance, were the excessive prevalence of north and northeast winds, and the excessive amount of ozone during the past three months. The prevention of influenza and of the coincident frequency of other more dangerous diseases has not been possible because of ignorance of the causes. Now the causes are known, and the study of the measures for the prevention can begin.

How to procure more thorough disinfection after contagious diseases was brought up by Dr. Hazlewood, also by a letter from Dr. Nicholson, of the Upper Peninsula, and by other correspondence of the office of the Board. It seems to be plain that if the bill now before the Legislature (Senate bill 257, House bill 640), making a small appropriation to enable the State Board of Health to send an inspector to the localities where one is most needed, to aid in the final disinfection after cases of infectious diseases, shall become a law, the spread of those diseases can be very greatly lessened, and hundreds, and possibly thousands, of lives can be saved in Michigan every year.

The Death-rates of European Cities.—The death-rate per thousand, for the year 1890, in Berlin, was 21.6; in Paris, 24.5; in Vienna, 24.6. Of twenty-two of the larger European cities, Stockholm had the lowest rate, 19.6; then followed London, 20.3; Christiania, 21.1; Brussels, 21.5. The highest rate existed at Munich, 30; Budapest, 31.4; and Moscow, 40.3.

THE seventeenth annual session of the Mississippi Valley Medical Association will be held at St. Louis, October 14, 15 and 16, 1891. An invitation to attend the meeting is extended to the members of the medical profession.

Dr. Samuel O. L. Potter, M.R.C.P.—Dr. Potter, of the Cooper Medical College of San Francisco, has lately had conferred upon him the degree of Member of the Royal College of Physicians of London. Professor Osler, of Baltimore, and Dr. Robinson, of San Francisco, are said to be the only other Americans holding the degree.

Lehigh Valley Medical Association.—The eleventh annual meeting of the Lehigh Valley Medical Association will be held at Mauch Chunk, June 25, 1891. Dr. Howard A. Kelly, of Johns Hopkins University, will deliver the annual address. His subject will be "Injuries to the Vaginal Outlet."

Washington State Medical Society.—The second annual meeting of the Washington State Medical Society was held at Seattle, May 6th, 7th, and 8th.

The President, C. K. Merriam, of Spokane, read the Annual Address. Dr. E. E. Heg, of North Yakima, delivered the address in Anatomy; Dr. H. P. Tuttle, of Tacoma, the address in Physiology; Dr. N. Fred. Essig, of Spokane, the address in General Surgery; Dr. E. L. Smith, of Seattle, the address in Abdominal Surgery; Dr. J. B. Wintermeuth, of Tacoma, the address in Surgery of the Brain; Dr. C. H. Willison, of Port Townsend, the address in Genito-urinary Surgery; Dr. J. J. McKone, of Tacoma, the report in Obstetrics and Gynecology; Dr. T. V. Goodspeed, of Seattle, read a paper entitled "Do Maternal Impressions Affect the Fœtus in Utero?" Dr. J. W. Waughop, of Steilacoom, on "Treatment of the Insane;" Dr. W. J. Redpath, of Steilacoom, on "Analgesia of the Insane;" Dr. G. S. Armstrong, of Olympia, "On the Existence of an Intellectual Centre;" Dr. C. W. Sharples, of Seattle, on "Increased Reflexes and Allied Phenomena;" and Dr. A. B. Kibbe, of Seattle, on the "Importance of Free Nasal Respiration."

The following officers were elected for the ensuing year:

President, Dr. H. C. Willison, of Port Townsend.

Vice-Presidents, Dr. G. W. Libby, of Spokane, and Dr. H. P. Tuttle, of Tacoma.

Secretary, Dr. Elmer E. Heg, of North Yakima.

Treasurer, Dr. James B. Eagleston, of Seattle.

The next meeting will be held in North Yakima, on the second Wednesday in May, 1892, and continue for three days.

Massachusetts Medical Society.—The one hundred and tenth anniversary of this Society was held in Boston, June 9th and 10th. The programme included papers by Drs. Pierce, of Bernardston ("Typhoid Fever"); J. A. Jeffries, of Boston ("The Bacillus of Typhoid"); Withington, of Roxbury ("Bright's Disease"); Thorndike, of Boston ("Catheter Fever"); F. H. Williams, of Boston ("How Shall We Nourish in Acute Disease?"), and many others. The Shattuck Lecture was delivered by Dr. Edward Cowles, of Somerville, and the annual discourse by Dr. James B. Brewster, of Plymouth.

The New Hampshire Medical Society will hold its annual meeting and celebrate the centennial anniversary of its organization at Concord, June 15, 16, and 17, 1891. An interesting programme has been arranged. In ad-

dition to the regular business proceedings, and the reading of medical, historical, and biographical papers, there will be an excursion to Alton Bay and an anniversary dinner. A cordial invitation of attendance is extended to the medical profession.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 2 TO JUNE 8, 1891.

By direction of the Secretary of War, the leave of absence on surgeon's certificate of disability, granted SAMUEL M. HORTON, *Major and Surgeon*, in S. O. 49, March 4, 1891, from this office, is extended three months on surgeon's certificate of disability.—Par. 6, S. O. 129, A. G. O., June 4, 1891.

By direction of the Secretary of War, VAN R. HOFF, *Captain and Assistant Surgeon*, is relieved from duty as a member of the Board of Medical Officers to which he was assigned by Par. 6, S. O. 78, April 7, 1891, from this office, and will, upon the completion of the duties assigned him by Par. 6, S. O. 110, May 14, 1891, from this office, return to his proper station, Fort Riley, Kansas.—Par. 11, S. O. 126, A. G. O., June 3, 1891.

By direction of the Secretary of War, Par. 1, S. O. 74, May 22, 1891, Department of the Columbia, transferring JOHN D. HALL, *Major and Surgeon*, from Fort Canby, Washington, to Fort Sherman, Idaho, is confirmed.—Par. 4, S. O. 126, A. G. O., June 3, 1891.

By direction of the Secretary of War, the extension of leave of absence on account of sickness, granted HENRY P. BIRMINGHAM, *Captain and Assistant Surgeon*, in S. O. 108, May 12, 1891, from this office, is further extended to June 21, 1891, on surgeon's certificate of disability.—Par. 6, S. O. 125, A. G. O., June 2, 1891.

With approval of the Secretary of War, leave of absence for three months, to take effect on or about June 15, 1891, is granted DAVID L. HUNTINGTON, *Major and Surgeon*.—Par. 2, S. O. 124, A. G. O., June 1, 1891.

KEAN, JEFFERSON R., *Captain and Assistant Surgeon*.—Is granted leave of absence for one month, to take effect after the return of Robert H. White, *Major and Surgeon*, to duty at Fort Myer, Virginia.—Par. 1, S. O. 123, A. G. O., May 29, 1891.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY FOR THE WEEK ENDING JUNE 6, 1891.

GRAVATT, C. U., *Surgeon*.—Detached from Naval Hospital, Yokohama, Japan, and ordered home.

ROGERS, FRANKLIN, *Surgeon*.—Detached from special duty at Norfolk, Va., and ordered to Yokohama Hospital.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE TWO WEEKS ENDING JUNE 6, 1891.

FESSENDEN, C. S. D., *Surgeon*.—Granted leave of absence for thirty days, June 6, 1891.

IRWIN, FAIRFAX, *Surgeon*.—Leave of absence extended seven days, June 4, 1891.

MEAD, F. W., *Surgeon*.—When relieved at Chicago, Ill., to proceed to Washington, D. C., and report to the Supervising Surgeon-General for duty, May 29, 1891.

MAGRUDER, G. M., *Passed Assistant Surgeon*.—Granted leave of absence for five days, June 1, 1891.

YOUNG, G. B., *Assistant Surgeon*.—Leave of absence extended fifteen days, on account of sickness, June 6, 1891.

COMMUNICATIONS are invited from all parts of the world. Original articles contributed exclusively to THE MEDICAL NEWS will upon publication be liberally paid for, or 250 reprints will be furnished instead of payment, provided that the request for reprints be noted by the author at the top of the manuscript. When necessary to elucidate the text, illustrations will be provided without cost to the author.

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